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International Specialists in the Environment

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MEMORANDUM

TO: Rachel Loftin, EPA Region IX

FROM: Jim James, Ecology and Environment, Inc. JMJ

DATE: September 6, 1991

SUBJECT: Completed Work

cc: Marcia Brooks, E & E FIT

Attached is the following completed:

PA___ PA Review___ SSI___ LSI___ SIRe___

Other EPI-PA

Site Name: Varian Associates - Solid State Microwave Division

EPA ID #: CAT000625392 (226)

City, County: Santa Clara, Santa Clara County

State Recommendation:
(for Reviews only)

WDR2 - 9/11/91

FOR EPA USE ONLY

CERCLIS Lead: EPA Lead | PA-1 Complete | "D" 9.9.91 | C399 = E

NPL Ind = N

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ENVIRONMENTAL PRIORITIES INITIATIVE
PRELIMINARY ASSESSMENT

Purpose: RCRA Preliminary Assessment

Site: Varian Associates
Solid State Microwave Division
3251 Olcott Street
Santa Clara, California
Santa Clara County

Site EPA ID Number:	CAT000625392
TDD Number:	F9-9105-029
Program Account Number:	FCA1787RAA
FIT Investigators:	Kathy Zavitz Abby Goldenberg
Date of Inspection:	July 30, 1991
Report Prepared By:	Kathy Zavitz KZ
Report Date:	September 6, 1991
Through:	Lorene Flaming
FIT Review/Concurrence:	James M. James 9/4/91
Submitted To:	Rachel Loftin Site Assessment Manager EPA Region IX

ecology and environment, inc.
160 SPEAR STREET, SAN FRANCISCO, CALIFORNIA 94105, TEL. 415/777-2811
International Specialists in the Environment

1. INTRODUCTION

As part of its Environmental Priorities Initiative (EPI) program, the U.S. Environmental Protection Agency (EPA) has requested Ecology and Environment, Inc.'s Field Investigation Team (E & E FIT) to conduct a Preliminary Assessment (PA) of Varian Associates, located at 3251 Olcott Street, Santa Clara.

The EPI program integrates the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the 1984 Hazardous and Solid Waste Amendments (HSWA), with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), in order to set priorities for cleanup of the most environmentally significant sites first. The Preliminary Assessment is conducted using CERCLA Hazard Ranking System (HRS) criteria to determine the site's eligibility for inclusion on the National Priorities List and, thus, assists in prioritizing facilities for the RCRA program.

2. SITE DESCRIPTION

2.1 SITE LOCATION AND OWNER/OPERATOR HISTORY

The Varian Associates, Solid State Microwave Division (Varian) site is located at 3251 Olcott Street, Santa Clara, California (lat. 37°20'42"N., long. 121°56'48"W.). The facility covers 3 acres in the San Tomas Business Park, which is zoned for commercial and industrial use. The property is bounded on the north by the Bayshore Freeway and on the east by the San Tomas Expressway (refer to Figure 2-1, Site Location Map)(1,2,4). The site was used for agricultural purposes prior to construction of the Varian facility in 1977 or 1978 (3).

The facility was purchased by Litton Solid State Microwave Division in February 1991. Operations remained the same after the change of ownership (4).

2.2 FACILITY PROCESSES/WASTE MANAGEMENT

2.2.1 Historical

Varian designed, built, marketed and serviced high technology products for customers in industry, communications, defense, science, and medicine. Products included electron tubes, solid state devices, vacuum components and systems based on vacuum technology, analytical instruments, medical systems, and magnetic components (2).

Hazardous wastes generated from semiconductor manufacturing processes are flammables, corrosives, and halogenated solvents. Processes creating waste included cleaning, etching, plating, developing, degreasing, and other operations performed on a small scale as part of production of solid state oscillators, amplifiers, and microwave semiconductors (2,6,12). These wastes were stored for less than 90 days in a drum storage area until they were sent off site for disposal, treatment or

Source: U.S.G.S. 7.5' Milpitas Quadrangle

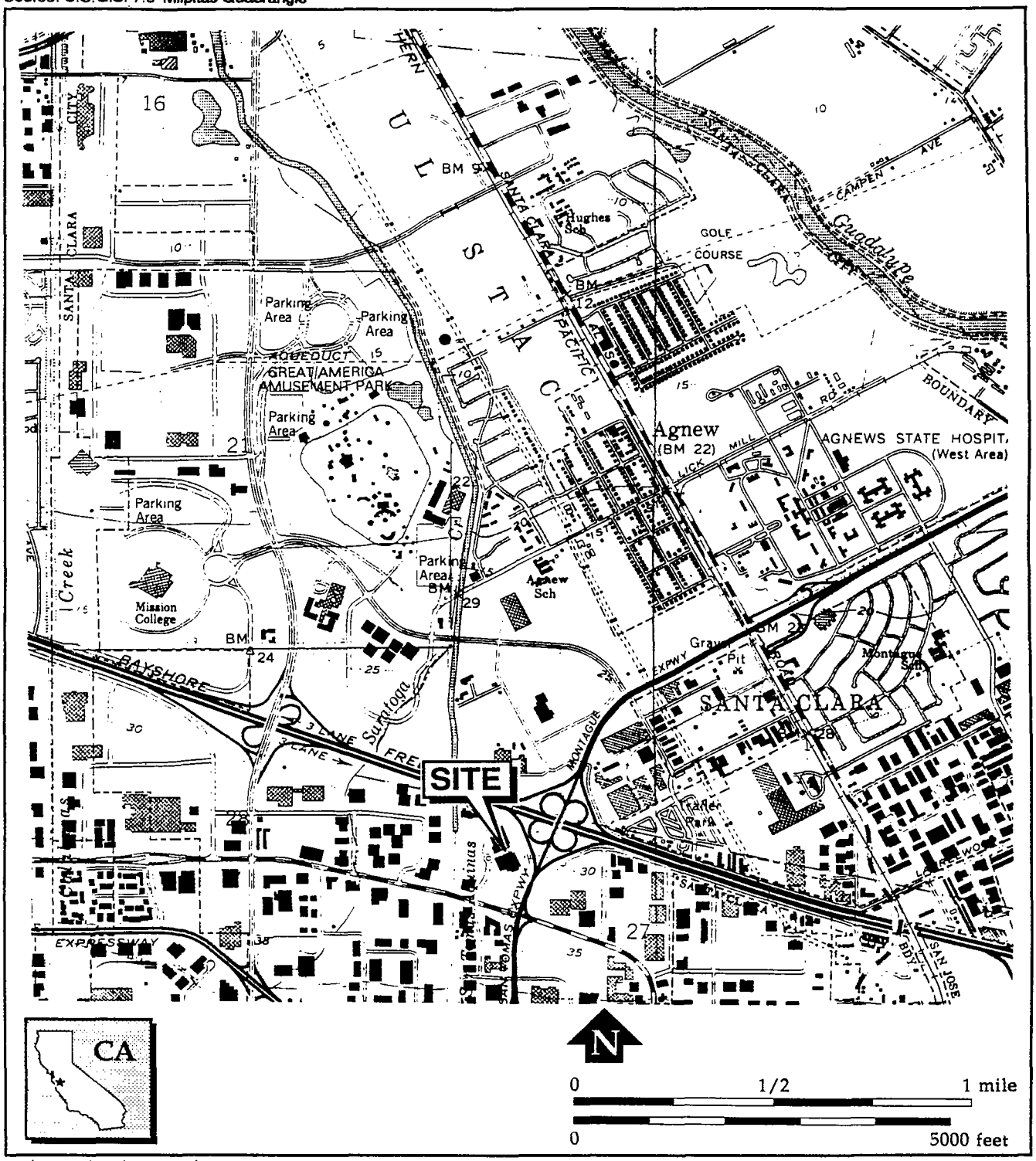

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Figure 2-1

SITE LOCATION MAP
VARIAN SOLID STATE MICROVAVE DIVISION
3251 Olcott Street
Santa Clara, California

recycling. The drum storage area at the facility had and currently has the capacity to hold a maximum of 20 55-gallon drums (see Figure 2-2, Facility Map) (2).

Varian treated wastewater generated on site in an acid neutralization system. Wastewaters included waste/spent nitric acid, sulfuric acid, hydrochloric acid, and aqua regia solutions. These wastewaters were gravity fed from various work stations and a semiconductor overflow drain and collected in a 450-gallon acid collection sump. Wastewater was then pumped into the 250-gallon holding tank, and subsequently transferred into a 10,000-gallon neutralization tank for treatment. Treatment was accomplished through the addition of sodium hydroxide or hydrochloric acid to adjust pH, prior to discharge into the city sewer. In 1989, the facility treated approximately 1,570 gallons of wastewater per day in the acid neutralization unit (2,8).

On May 5, 1985, a leak occurred in the 400-gallon acid wastewater sump. The leak was contained after an estimated 20 gallons of wastewater escaped. The wastewater sump was reconditioned and upgraded at that time. Varian subsequently removed the existing neutralization tank and replaced it with a new one. A new holding tank was also installed in 1985 (2).

Varian had three satellite accumulation areas at the facility where wastes were temporarily stored before being consolidated in the hazardous waste storage area (4).

2.2.2 Current

Facility processes and waste management at the site under Litton's ownership remain the same (4).

3. REGULATORY INVOLVEMENT

3.1 U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

Varian submitted Part A of the hazardous waste permit application on November 11, 1980 (2). The Varian Associates site is listed in the April 12, 1991 RCRA database as a Generator 1 (large quantity generator) and a Treatment, Storage, and Disposal Facility (TSDF) with a permit status of 4. Permit status 4 means the site is a permit withdrawal candidate. The RCRA database lists a notification date of August 18, 1980 (7). No Part B of the hazardous waste permit application was ever submitted (4).

3.2 CALIFORNIA DEPARTMENT OF HEALTH SERVICES (DHS)

DHS issued Varian an Interim Status Document (ISD) on March 30, 1981 for storage in containers and treatment (neutralization) in tanks (2,8).

On April 15, 1983, Varian requested a hazardous waste facility permit variance for the container storage area because wastes were stored less than 90 days. On May 6, 1983, DHS received another letter from Varian requesting reclassification of the company's ISD to a "generator-only"

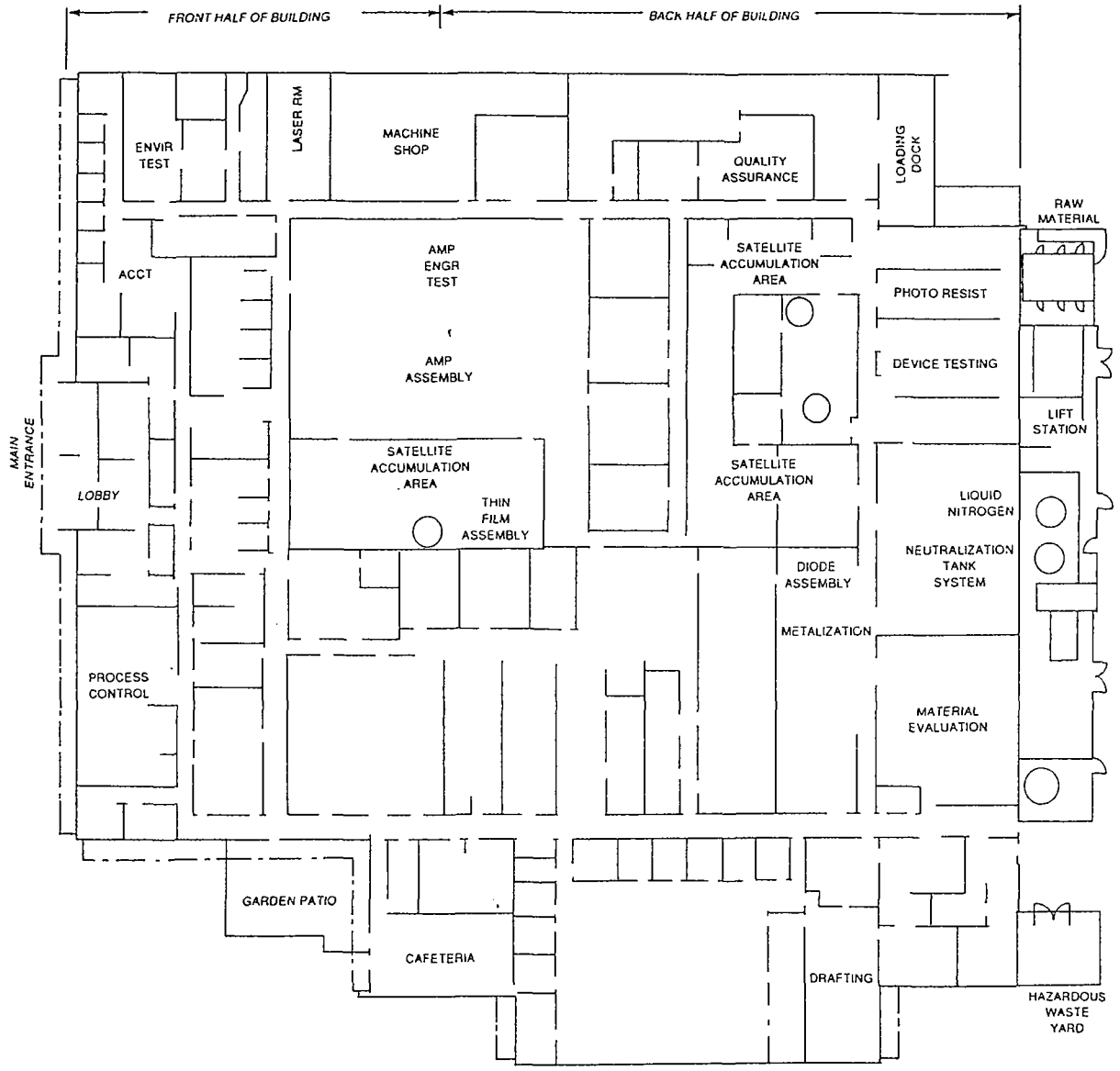

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Figure 2-2

FACILITY MAP
VARIAN SOLID STATE MICROWAVE DIVISION
3251 Olcott Street
Santa Clara, California

status because the facility was not storing hazardous waste longer than 90 days and because the facility was not treating hazardous waste, except for elementary acid neutralization. The facility was granted generator-only status for the storage of hazardous waste in containers in 1984 (but retained its TSDF status for the neutralization unit) (2,8).

Varian requested a variance from hazardous waste permit requirements for the elementary neutralization unit because the Santa Clara publicly owned treatment works (POTW) regulates discharges from this unit. On May 11, 1984, DHS denied this request based on a concern regarding the possible leakage of hazardous waste from the sumps used for neutralization of the acid wastewater. The unit was subsequently replaced. In January 1986, the facility reapplied for a variance on the neutralization unit (2). According to DHS correspondence dated December 1987, the facility has continued to be regulated under Interim Status for this unit (31).

The site has an Extremely Hazardous Waste Disposal Permit for materials including dry cyanide salts, mercury, bromine/methanol, hydrofluoric acid, arsenic, and cyanide. These materials are hauled away in drums (10).

DHS inspected the facility in 1984, 1987, 1989, and 1991 and found only minor violations (2,8,29).

3.3 CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)

RWQCB does not maintain any files on the site. The site does not have a National Pollution Discharge Elimination System (NPDES) permit, and it is not on the underground tank list or the fuel leak list (11).

3.4 BAY AREA AIR QUALITY MANAGEMENT DISTRICT (BAAQMD)

The site has several air permits from BAAQMD for equipment and processes. There have been four minor violations of air regulations over the history of operation at the site (4,30).

3.5 SAN JOSE/SANTA CLARA WATER POLLUTION CONTROL PLANT

The facility has an industrial wastewater discharge permit with the San Jose/Santa Clara Water Pollution Control Plant. All sinks drain into a 4-inch acid waste line under the floor. The acid waste line drains into the acid neutralization system. Treated process wastewater is sampled at the neutralizaiton tank and results are sent to the San Jose/Santa Clara Water Pollution Control Plant (12).

4. DESCRIPTIONS OF INDIVIDUAL SOLID WASTE MANAGEMENT UNITS

Distinct Solid Waste Management Units (SWMUs) have been identified to evaluate potential on-site sources of releases to air, surface water, groundwater, and soil. A SWMU is defined as any discernible waste management unit at a facility from which hazardous constituents might migrate, irrespective of whether the unit was intended for the management of solid and/or hazardous waste. As a result of this Preliminary

Assessment, FIT has identified two significant SWMUs at the site. Additional SWMUs may exist.

4.1 ELEMENTARY ACID NEUTRALIZATION (TREATMENT) UNIT

Unit Description: Wastewater from process areas is gravity-fed into either the transfer sump or the neutralization tank. Wastes collected in the transfer sump are pumped into the neutralization tank by pumps which are controlled by float switches. The tank also has a high level alarm. Wastes treated in the neutralization tank first enter a holding tank which equalizes the flow. Then the water enters a mixing tank where the pH is netralized via a caustic soda or acid injection which is monitored by a pH probe. A pH of between 5 and 10.5 is maintained in the outflow as required by City ordinance (2).

The neutralization tank is fenced and locked at all times (6). The neutralization unit measures 3 feet by 6 feet by 12 feet; the transfer sump is round and measures 4 feet deep and 5 feet in diameter. The treated wastewater is discharged into the San Jose/Santa Clara Water Pollution Control Plant (2).

Date of Start-up: The neutralization tank, holding tank, and transfer sump were installed November 1980 and replaced or reconditioned in 1985 (2,6).

Date of Closure: This unit is active (4).

Waste Managed: Wastewaters are gravity fed from various work stations and the semiconductor overflow drain. Rinsewaters containing solutions of hydrochloric acid, nitric acid, sulfuric acid, phosphoric acid, sodium hydroxide, hydrogen peroxide, ammonium hydroxide, aqua regia solutions with deionized water, nickel, bromine, fluorine, gold and silver are treated in the acid wastewater neutralization unit. The unit treats approximately 1,570 gallons of wastewater a day (2,6).

Release Controls: The neutralization tank is surrounded by a berm (4). The tank is mounted in the ground and is surrounded by asphalt. Tanks and piping are made of polypropylene which is resistant to acid solutions. Pipes are fuse-sealed where joined together (2).

History of Releases: On May 23, 1985, Varian notified DHS by letter of a leak in the 400-gallon acid wastewater sump on May 5, 1985. The leak was contained after an estimated 20 gallons of wastewater escaped. The wastewater sump was subsequently reconditioned and upgraded. Additionally, Varian replaced the existing neutralization tank and hloding tank in 1985 (2).

4.2 DRUM STORAGE AREA

Unit Description: The drum storage area is located outside adjacent to the building. It is covered by a roof and is fenced and locked. The dimensions are 20 feet by 20 feet. The area holds a maximum of 20

55-gallon drums. Wastes are stored for less than 90 days until they are sent off site for disposal, treatment, or recycling (2).

Date of Start-up: The unit start date is unknown. Operations began at the site in 1977 (4).

Date of Closure: This unit is active (4).

Waste Managed: Hazardous wastes generated from semiconductor manufacturing processes include flammables, corrosives, and halogenated wastes (2).

Release Controls: The drum storage area is an area of asphalt pavement and has two concrete diked areas recessed into the ground and painted with an epoxy paint. An asphalt berm surrounds the entire area. The drums are situated on wooden pallets to raise them above any rainwater which may collect in the dikes. This rainwater is periodically sampled and pumped out. The area is divided to separate acids, flammables, and halogenated wastes (2,6).

History of Releases: There have been no known releases from this area and no known sampling of this area (4).

5. HRS FACTORS

The Hazard Ranking System (HRS) is a scoring system used to assess the relative threat associated with actual or potential releases of hazardous substances from sites. It is the principal mechanism EPA uses to place sites on the National Priorities List (NPL). FIT has evaluated the following HRS factors relative to this site.

5.1 WASTE TYPE AND QUANTITY

Rinsewater containing solutions of hydrochloric acid, nitric acid, sulfuric acid, phosphoric acid, sodium hydroxide, hydrogen peroxide, ammonium hydroxide, aqua regia solutions with deionized water, nickel, bromine, fluorine, gold and silver is treated in the acid wastewater neutralization unit. The neutralization system consists of a 400-gallon acid wastewater sump, a 250-gallon holding tank, and a 1,000-gallon neutralization tank. The facility treats approximately 1,570 gallons of wastewater a day in the acid neutralization unit (see Section 4.1) (2,6,8,32).

Hazardous wastes generated from semiconductor manufacturing processes including flammables, corrosives, and halogenated wastes are drummed and stored in the hazardous waste storage area and shipped off every 90 days (2). The facility has an Extremely Hazardous Waste Disposal permit which regulates the disposal of dry cyanide salts, mercury, bromine/methanol, and arsenic in polyethylene drums. These wastes are also shipped off site for disposal every 90 days (10). The hazardous waste drum storage area has the capacity to hold 20 55-gallon drums (see Section 4.2)(2).

5.2 GROUNDWATER

The potential for a release to groundwater appears to be low due to the current containment of the wastes; however, there was a leak in the neutralization system in 1985 resulting in a release of 20 gallons of wastewater to the environment (2). Three monitoring wells were installed on site to monitor groundwater conditions: two downgradient and one upgradient. These wells were reportedly installed to monitor migration of groundwater contamination from a nearby Varian site. According to Litton, the results of on-site groundwater monitoring well sampling have not revealed contamination in groundwater at the site. It is unknown what constituents are analyzed for and no data was provided to FIT (4).

The site lies in the Santa Clara Subbasin, a large structural depression in the Santa Clara Valley filled with alluvial and lacustrine deposits. This subbasin consists of a peripheral recharge zone known as the "forebay" and an interior, confined zone. The forebay consists of coarser, more permeable alluvium separated by discontinuous aquitards of limited lateral extent. The site lies in the interior of the Santa Clara Valley within the confined zone. In the vicinity of the site the upper aquifer extends vertically downward to 100 feet below ground surface (bgs). The lower aquifer begins at approximately 190 to 230 feet bgs and extends vertically to approximately 500 feet bgs (13). The depth to groundwater beneath the site flucuates between approximately 8 and 15 feet bgs (4).

Although the confined zone is characterized by two aquifers separated by a silty clay aquitard, aquifer interconnection exists based on the presence of approximately 10,000 abandoned agricultural wells in the area. Many of these abandoned wells may act as conduits capable of transporting contaminants from the upper to the lower aquifer zones (13,14,19). Most groundwater flow in this area is to the north, toward San Francisco Bay (15).

There are several water purveyors within 4 miles of the Varian site including the Santa Clara Valley Water District, the City of Sunnyvale, the San Jose Water District, and the San Jose Municipal Water District (16,17,18,20,21,23).

The City of Santa Clara blends surface and groundwater to serve a population of approximately 90,900. The sources are: 28 active municipal water wells, the Hetch-Hetchy Project, and the Santa Clara Valley Water District. The Santa Clara Valley Water District gets its water from the Lexington Dam, Stevens Creek, the Sacramento Delta, and the San Felipe Reservoir. There are seven wells within this system that are between 1 and 2 miles away from the site. The wells within this system are the closest municipal wells to the site (16,17,18,23). The City of Sunnyvale drinking water is blended from three sources to serve a population of approximately 120,000. The three sources include: 10 active municipal wells; the Hetch-Hetchy Project; and the Santa Clara Valley Water District (23).

The San Jose Water Company (SJWD) provides water to approximately 750,000 residents in San Jose, Los Gatos, Campbell, Cupertino, and Saratoga. The water supply consists of 55 percent groundwater, with the rest of the water imported from the Hetch-Hetchy Reservoir. SJWD has approximately 147 wells (18,19,20).

The San Jose Municipal Water District (SJM) supplies water to Alviso, Coyote, Evergreen, and northern areas of San Jose. The population served is approximately 80,000. SJM is divided into four service areas, two of which are served solely by groundwater, and two (north San Jose and Coyote) are served by both surface water and groundwater. In 1988, the ratio of surface water to groundwater was 88 percent to 12 percent; this ratio varies due to drought conditions. There are 13 active wells (21).

5.3 SURFACE WATER

The potential for a release of contaminants to surface water is low due to the current containment of wastes and the distance to surface water. The surface water bodies located within 2 miles of the site include San Tomas Creek 0.5 miles east of the site, Saratoga Creek 0.5 miles west of the site, Calabazas Creek 1 mile west of the site, and Guadalupe River 2 miles north. Guadalupe River flows into the south end of San Francisco Bay approximately 5 miles north of the site (1,22). None of these surface water bodies are used for drinking (23).

Beneficial uses of San Francisco Bay include commercial fishing and recreation. The primary commercial fishing conducted in the south bay is for shrimp and herring. Sport fishing also occurs in the southern bay but the reported catches of fish are low. The annual catch of herring from the entire San Francisco Bay in the 1989-90 season (December 1989 - March 7, 1990) was 9,000 tons (25,26).

San Francisco Bay is known to contain many sensitive environments and species. The wetlands and sloughs of the southern San Francisco Bay, including the San Francisco Bay Wildlife Refuge, are habitats for several endangered or threatened animal species. Among these species are the California black rail (Laterallus jamaicensis coturniculus), a state-designated threatened species, the California clapper rail (Rallus longirostris obsoletus), a state and federally designated endangered species, and the salt marsh harvest mouse (Reithrodontomys ravinentris), a state and federally designated endangered species (5).

The 2-year, 24-hour rainfall in the Santa Clara valley is approximately 3 inches (24). The site lies within a 500-year flood zone (27).

5.4 AIR

There are no apparent inadequately contained hazardous substances available to the air pathway. All wastes are treated by the acid neutraliztion system or stored in closed 55-gallon drums (4). BAAQMD reported 4 minor violations throughout the site's history (30). Refer to Table 1 for the estimated population within 4 miles of the site based on 1980 census figures (28).

Table 1

Population Within 4 Miles of the Site

DISTANCE	POPULATION
0 - 0.25	0
0.25 - 0.5	7,218
0.5 - 1	15,684
1 - 2	43,236
2 - 3	82,983
3 - 4	110,195

5.5 SOIL EXPOSURE

The potential for soil exposure is low. Varian is in a light industrial area. No one lives at the site. The entire site is paved and/or landscaped. The hazardous waste storage area and the neutralization tanks are both in fenced and locked areas (4).

6. SUMMARY OF FIT INVESTIGATIVE ACTIVITIES

6.1 AGENCIES CONTACTED

FIT contacted DHS, RWQCB, Sunnyvale Department of Public Works, Santa Clara Water Department, San Jose Water Department, San Jose Municipal Water District, and California Department of Fish and Game to gather information on this site and environmental conditions in the area (11,15,16,17,19,20,21,23,26,27).

6.2 RECONNAISSANCE OBSERVATIONS

FIT conducted a site reconnaissance July 30, 1991. FIT members Kathy Zavitz and Abby Goldenberg toured the facility and met with Dennis Baker and Don Hall of Litton. Varian sold the facility to Litton in February 1991. Several areas of the facility are being remodeled to accommodate the needs of the new owners. However, most of the operations have not changed since the acquisition. The site was paved and the drum storage area and neutralization system were well-marked and fenced (4). Information gathered during the site reconnaissance is presented throughout this report. For additional information, refer to the Site Reconnaissance Interview and Observations Report in Appendix A and the photographs in Appendix B.

7. EMERGENCY RESPONSE CONSIDERATIONS

The National Contingency Plan [40 CFR 300.415(b)(2)] authorizes the Environmental Protection Agency to consider emergency response actions at those sites which pose an imminent threat to human health or the environment.

There is no apparent need for a referral to EPA's Emergency Response Section at this time because all wastes appear to be adequately contained, no evidence of on-site contamination exists, and the site is secured from public access (4).

8. SUMMARY OF HRS CONSIDERATIONS

The Varian Solid State Microwave Division site is located in a industrial area of Santa Clara, California. The site was used for agricultural purposes prior construction of the facility in 1977 or 1978. The facility was purchased from Varian Associates by Litton Solid State Microwave Division in February 1991. Operations remained the same after the change of ownership.

Varian designed, built, marketed and serviced high technology products for customers in industry, communications, defense, science, and medicine. Products include electron tubes, solid state devices, vacuum components and systems based on vacuum technology, analytical instruments, medical systems, and magnetic components.

Hazardous wastes generated from semiconductor manufacturing processes include flammables, corrosives, and halogenated wastes. Processes creating waste include cleaning, etching, plating, developing, degreasing, and other operations performed on a small scale as part of production of solid state oscillators, amplifiers, and microwave semiconductors. These wastes are stored for less than 90 days in a drum storage area until they are sent off site for disposal, treatment or recycling.

Wastewater generated on site is treated in an acid neutralization system. Treatment is accomplished through the addition of sodium hydroxide or acid to adjust pH, prior to discharge into the city sewer.

Three groundwater wells on site monitor groundwater conditions at the site. According to facility representatives, no contamination has been detected to dated. It is unknown what analysis are conducted.

The following are significant Hazard Ranking System factors associated with the Varian Solid State Microwave Division site:

- Small apparent waste quantity;
- Wastes are apparently well-contained;
- Low potential for a documented release to groundwater, surface water, and/or air; and
- Groundwater within 4 miles of the site serves a large population.

9. EPA RECOMMENDATION

	Initial	Date
No Further Remedial Action Planned under CERCLA		
Higher-Priority for Further Assessment under CERCLA		
Lower-Priority for Further Assessment under CERCLA		
Defer to Other Authority (e.g., RCRA, TSCA, NRC)	[illegible]	9.11.91

Notes:

10. REFERENCES

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APPENDIX A

CONTACT LOG AND REPORTS

CONTACT LOG

Facility Name: Varian Associates
Facility ID: CAT000625392

Name	Affiliation	Phone #	Date	Information
Alex Sandigo	City of Sunnyvale Department of Public Works	408-730-7800	11/10/89	See Contact Report.
Mike Dulde	City of Santa Clara Water Department	408-984-3183	11/13/89	See Contact Report.
Tim Iwamura	Santa Clara	408-927-0710	10/22/90	See Contact Report.
Scott Yoo	San Jose Water Company	408-279-7818	12/5/90	See Contact Report.
Bob Kenton	City of San Jose Municipal Water District	408-227-3671	12/5/90	See Contact Report.
Paul Reiley	California Department of Fish & Game	415-688-6340	1/9/91	See Contact Report.
Scott Yoo	San Jose Water Company	408-279-7818	3/12/91	The city of San Jose is served by 148 wells to serve 43.8 percent of the total population of 750,000. There are no surface water intakes in north San Jose. There are numerous agricultural wells in the Santa Clara Valley.
John Linda	City of Sunnyvale Department of Public Works	408-265-2600	3/11/91	Sunnyvale water is blended from wells, Hetch-hetchy and Santa Clara Valley Water District. It would be very difficult to determine breakdown of distribution.

kz/va/clcr

CONTACT LOG

Facility Name: Varian Associates
Facility ID: CAT000625392

Name	Affiliation	Phone #	Date	Information
Dennis Ma	Santa Clara Department of Public Works	408-984-3183	4/1/91 4/18/91	The site lies in a 500-year flood zone.
Dick Gates	Santa Clara Valley Water District	408-265-2600 ext. 223	4/1/91	He will fax FIT info. on stream flow for Saratoga Creek, San Tomas Aquinas Creek and Guadaloupe River.
Verne Christianson	Environmental Protection Agency	415-774-2422	4/16/91	EPA does not have a Part B Permit application for Varian.
Candy Hamill	San Jose Water Company	408-279-7808	4/18/91	See Contact Report.
~~Dennis Ma~~			4/18/91	" "
Steve Hill Penny Silzer	Regional Water Quality Control Board	415-464-0422	~~5/14/91~~	There is no NPDES permit for the Varian site. This site is not listed on the South Bay Toxics list, the Underground Storage Tank list or the Fuel Leak list.
Doris Cruz	Department of Health Services	415-540-3300	6/13/91	FIT set up an appointment to review files.
David Hansen	Santa Clara County Health Department	408-299-5822	6/17/91	There is file information.
Kwiyukwa Madoshi	Department of Health Services	415-540-3871	6/26/91	He inspected the facility recently and will send FIT the Inspection Report.
Dennis Baker	Litton Solid State Microwave Division	408-988-1331	7/30/91	See Site Reconnaissance Interview and Observations Report.

kz/va/clcr

CONTACT LOG

Facility Name: Varian Associates
Facility ID: CAT000625392

Name	Affiliation	Phone #	Date	Information
Duncan Campbell	Bay Area Air Quality Management District	415-449-4722	8/26/91	The facility has several air permits for equipment and processes. In the past 31 years, the facility has had approximately 4 minor air permit violations. He will send FIT copies of these violations.

kz/va/clcr

CONTACT REPORT

AGENCY/AFFILIATION: City of Sunnyvale		
DEPARTMENT: Public Works Department		
ADDRESS/CITY: 221 Commercial Street, Sunnyvale		
COUNTY/STATE/ZIP: Santa Clara, CA 94086		
CONTACT(S)	**TITLE**	**PHONE**
1. Alex Sandigo	Department Supervisor	408-730-7800
2.		
PERSON MAKING CONTACT: Yoon K. Toh		**DATE:** 11/10/89
SUBJECT: Water supply for the City of Sunnyvale		
SITE NAME: Varian Associates*		**EPA ID#:** CAT000625392

The City of Sunnyvale drinking water is blended from three sources:

1. 10 active municipal wells;
2. The Hetch-Hetchy Project; and
3. The Santa Clara Valley Water District, which gets its water from the Lexington Dam, Stevens Creek, the Sacramento Delta, and the San Felipe Reservoir.

No surface water bodies in the city are used for drinking water purposes. The population of the city of Sunnyvale is approximately 120,000.

* This Contact Report was originally used for San Lazaro Area Plume (CAD982399750).

kz/va/clcr

CONTACT REPORT

AGENCY/AFFILIATION: City of Santa Clara		
DEPARTMENT: Water Department		
ADDRESS/CITY: 1500 Warburton Avenue, Santa Clara		
COUNTY/STATE/ZIP: Santa Clara, CA 95050		
CONTACT(S)	**TITLE**	**PHONE**
1. Mike Dulde	Engineering Aide	408-984-3183
2.		
PERSON MAKING CONTACT: Yoon K. Toh		**DATE:** 11/13/89
SUBJECT: Water supply to the City of Santa Clara		
SITE NAME: Varian Associates*		**EPA ID#:** CAT000625392

The City of Santa Clara drinking water is blended from three sources:

1. 28 active municipal water wells;
2. The Hetch-Hetchy Project; and
3. The Santa Clara Valley Water District.

There are a total of 28 active wells in the city of Santa Clara. Wells #31 and #32 have not been drilled. Well #33 has been drilled but is not active. The active wells are: 2-02, 3, 4, 5-02, 6, 7, 8, 9-02, 10, 11, 12, 13-02, 14, 15, 16-02, 17-02, 19, 20-02, 21, 22-02, 22-03, 23, 24, 25, 26, 28, 29, 30.

The population of the city of Santa Clara is approximately 90,900.

* This Contact Report was originally used for Safety Kleen (CAD077187888).

kz/va/clcr

CONTACT REPORT

AGENCY/AFFILIATION: Santa Clara Valley Water District		
DEPARTMENT:		
ADDRESS/CITY: 5750 Almaden Expressway, Santa Clara		
COUNTY/STATE/ZIP: Santa Clara, CA 95118		
CONTACT(S)	**TITLE**	**PHONE**
1. Tim Iwamura	Hydrogeologist	408-927-0710
2.		
E & E PERSON MAKING CONTACT: Carol Weinstein		**DATE:** 10/22/90
SUBJECT: Area geology and groundwater conditions		
SITE NAME: Varian Associates*		**EPA ID#:** CAT000625392

Groundwater flow in the area is to the north. In the forebay zone, groundwater aquifers can be considered as a single hydrologic unit. In addition, perched water is not uncommon in this area.

* This Contact Report was originally used for Stauffer Chemical Company (CAD06356642).

CONTACT REPORT

AGENCY/AFFILIATION: San Jose Water Company (SJWC)		
DEPARTMENT:		
ADDRESS/CITY: 374 West Santa Clara Street, San Jose		
COUNTY/STATE/ZIP: Santa Clara, California 95196		
CONTACT(S)	**TITLE**	**PHONE**
1. Scott Yoo	Water Quality Manager	408-279-7818
2.		
PERSON MAKING CONTACT: Belinda Peters		**DATE:** 12/5/90
SUBJECT: Information on the water supply of San Jose		
SITE NAME: Varian Associates*		**EPA ID#:** CAT000625392

The San Jose Water Company (SJWC) provides water to most of San Jose (east to U.S. Highway 101 and west of Snell Road), Los Gatos, Campbell, Cupertino, and Saratoga. The foothills of Saratoga and Los Gatos are served by small independent companies. The water supply is a combination of groundwater and water imported from the Hetch-Hetchy Reservoir. The total population served by SJWC in 1989 was 750,000 residents. Mr. Yoo is sending me a water quality report which gives the water provision percentages and well location data. SJWC has 147 wells and no well produces greater than 40 percent of the water pumped.

* This Contact Report was originally used for Keystone Consolidated Industries (CAD009141433).

kz/va/clcr

CONTACT REPORT

AGENCY/AFFILIATION: City of San Jose (SJM)		
DEPARTMENT: Municipal Water District		
ADDRESS/CITY: 3025 Tuers Road, San Jose		
COUNTY/STATE/ZIP: Santa Clara, California 95121		
CONTACT(S)	**TITLE**	**PHONE**
1. Bob Kenton	Water Engineer	
2.		
PERSON MAKING CONTACT: Belinda Peters		**DATE:** 12/5/90
SUBJECT: Water supply information for the City of San Jose		
SITE NAME: Varian Associates*		**EPA ID#:** CAT000625392

The San Jose Municipal Water District (SJM) supplies water to Alviso, Coyote, Evergreen, and northern (northeast of U.S. Highway 101) areas of San Jose. The population served is approximately 80,000 residents. SJM is divided into four service areas, two of which are served solely by groundwater, and two (north San Jose and Coyote) are served by both surface water and groundwater. In 1988, the ratio of surface to groundwater was 88% imported to 12% pumped, and in 1989, the ratio was 98% imported to 2% pumped. Less water is being pumped now due to the drought. None of the groundwater wells pump greater than 40% of the total production. There are 13 wells used; none are interconnected. Water from this system has industrial as well as drinking uses.

* This Contact Report was originally used for Keystone Consolidated Industries (CAD009141433).

kz/va/clcr

CONTACT REPORT

AGENCY/AFFILIATION: Department of Fish and Game		
DEPARTMENT: Marine Biology		
ADDRESS/CITY: Menlo Park		
COUNTY/STATE/ZIP: California		
CONTACT(S)	**TITLE**	**PHONE**
1. Paul Reiley	Marine Biologist	415-688-6340
2.		
E & E PERSON MAKING CONTACT: Laura Kadlecik		**DATE:** 1/9/91
SUBJECT: Commercial Fishery in Block 489		
SITE NAME: Varian Associates*		**EPA ID#:** CAT000625392

Block 489 extends from the Oakland Bay Bridge to the southern tip of San Francisco Bay. In the southern end of the bay commercial fishing for bay shrimp and herring occurs. The halibut fishery does not extend to that end of the bay. The catch of bay shrimp in Block 489 during the month of November 1990 was 10,000 lbs. Herring catches are landed and weighed at several different locations in the bay that do not correspond to the catch blocks in which they were caught. The annual catch of herring from the entire San Francisco Bay in the 1989-90 season (December 1989 - March 7, 1990) was 9,000 tons.

The 15-mile target limit distance from the entrance of Moffett Channel into Guadalupe slough comprises about 27 percent of the catch block 489. Probably less than 5 percent of the herring caught from San Francisco Bay is from block 489.

Sport fishing also occurs in the southern bay but the known catches of fish are very low.

* This Contact Report originally used for Ball A.C. Co. (CAD009225434).

kz/va/clcr

CONTACT REPORT

AGENCY/AFFILIATION: San Jose Water Company		
DEPARTMENT:		
ADDRESS/CITY: San Jose		
COUNTY/STATE/ZIP: Santa Clara, California		
CONTACT(S)	**TITLE**	**PHONE**
1. Candy Hamill		408-279-7808
2.		
E & E PERSON MAKING CONTACT: Tom Genolio		**DATE:** 4/18/91
SUBJECT: Well information		
SITE NAME: Varian Associates*		**EPA ID#:** CAT000625392

There are 148 wells in the system. Total population served is 750,000 people. The company obtains water from groundwater (55%), imported South Bay Aqueduct water (38%), and local mountain surface water.

* This Contact Report was originally used for Continental Can Company (CAD000624634).

kz/va/clcr

CONTACT REPORT

AGENCY/AFFILIATION: Santa Clara Water Department		
DEPARTMENT:		
ADDRESS/CITY: Santa Clara		
COUNTY/STATE/ZIP: Santa Clara County, California		
CONTACT(S)	**TITLE**	**PHONE**
1. Dennis Ma	Senior Water Engineer	408-984-3183
2.		
E & E PERSON MAKING CONTACT: Tom Genolio		**DATE:** 4/18/91
SUBJECT: Wells within four miles of the site		
SITE NAME: Varian Associates		**EPA ID#:** CAT000625392

All wells generally draw from the same aquifer. There may be rare instances where, because of unknown aquitards, wells draw from different sources. No one well contributes more than 40% of the total water supply. The ratio of surface to groundwater varies considerably from year-to-year. This year they are relying on more groundwater (about 80%).

kz/va/clcr

SITE RECONNAISSANCE INTERVIEW AND OBSERVATIONS REPORT

Ecology and Environment, Inc.		
Field Investigation Team (FIT)		
160 Spear Street, Suite 1400		
San Francisco, California 94105		
(415) 777-2811		
E & E PERSON(S) CONDUCTING INTERVIEW AND MAKING OBSERVATIONS:		
Kathy Zavitz and Abby Goldenberg		
FACILITY REPRESENTATIVE(S):	**TITLE:**	**PHONE:**
Dennis Baker	Facility Manager	408-988-1331
Don Hall		408-988-1331
SITE NAME: Litton Solid State Microwave (formerly Varian)		**DATE:** 7/30/91
CITY/STATE: Santa Clara, CA		**EPA ID#:** CAT000625392

The following information was obtained during the interview:

Litton bought the facility on February 25, 1991 from Varian Associates. Operations and processes did not change dramatically after the sale.

The facility has been in operation since 1978. The area was agricultural land before that.

The facility is approximately 3 acres.

The facility has a variance for its hazardous waste permit regarding the drum storage area. The facility does not have a variance for the acid treatment facility, it is operated under a permit-by-rule from Department of Health Services.

There are three groundwater monitoring wells on site; one upgradient of the facility, two downgradient. These wells were installed in 1983 to monitor groundwater conditions in the area. Varian has another site close by that has had contamination problems, and the wells were put in to see if the plume had reached the Olcott Street facility. Nothing on site (no spills or leaks) prompted this installation. Sampling is conducted regularly and no contamination has ever been detected. The constituents sampled for were not discussed in the interview. Sampling results are not sent to any agency.

var/recon

No Part B has ever been submitted.

Depth to groundwater at the site varies from 6 to 15 feet below ground surface.

There are three satellite areas where hazardous wastes are kept until they are consolidated in the hazardous waste storage area.

The following agencies regulate the site actively: Santa Clara Fire Department, DHS, County of Santa Clara Hazardous Materials Department, San Jose Water Pollution Control Board, and EPA.

Water from the wastewater treatment process goes into the sanitary sewers.

The facility no longer uses freon in its processes.

The following observations were made during the site reconnaissance visit:

The facility is located in a light commecial business park. The site is paved with landscaping surrounding the perimeter of the building.

The neutralization system and the drum storage area are well-contained with berms. Each area is surrounded by a fence. There was no evidence of spills or leakage from either area.

APPENDIX B

PHOTODOCUMENTATION

FIELD PHOTOGRAPHY LOG SHEET

DATE: 7/30/91

WEATHER: warm and sunny

PHOTOGRAPHED BY: K. Zavitz

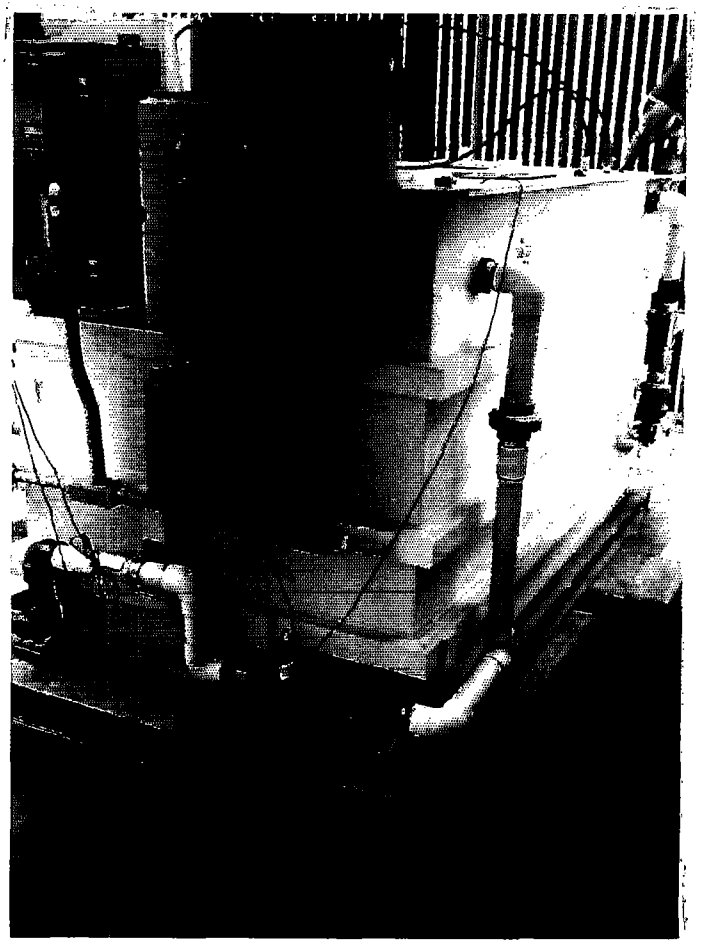
DESCRIPTION: The drum storage area is fenced and bermed. Drums are separated according to hazard classification.

DATE: 7/30/91

WEATHER: warm and sunny

PHOTOGRAPHED BY: K. Zavitz

DESCRIPTION: Acid neutralization system. This area is fenced and bermed.



varian/fpls

STATE OF CALIFORNIA—HEALTH AND WELFARE

GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL DIVISION
2151 BERKELEY WAY, ANNEX 7
BERKELEY, CA 94704

Ste B

FILE COPY

INSPECTION REPORT

Varian Associates, Inc.
Solid State, Microwave Division
3251 Olcott Street
Santa Clara, CA 95054

EPA ID No. CAT000625392

Inspected By: Richard Wheeler, AHMS

Date of Inspection: July 25, 1989

Date of Report: 8/24/89

I. Purpose:

Non-major, Interim Status, Focused TSD Facility Inspection, Land Ban Inspection and Hazardous Waste Generator Inspection.

II. Representatives Present:

Varian, Inc., Solid State, Microwave Division:
Denny Baker, Facilities Manager
Gary R. Kern, Environmental Engineer

DHS/TSCD:
Richard Wheeler, Assoc. Hazardous Materials Specialist

III. Owner/Operator:

Varian Associates, Inc., Solid State Microwave Division (Varian) is a division of Varian Associates, Inc. which is a Delaware Corporation. The personnel directly responsible for hazardous waste management at this facility in Santa Clara, California, is Denny Baker, Facilities Manager.

IV. Background:

According to the Toxic Substances Control Division (TSCD) files, Varian Associates, Inc., Solid State, Microwave Division (Varian) submitted a Part A application on November 11, 1980. An ISD was issued on March 30, 1981 for storage in containers and treatment in tanks.

On April 15, 1983, a letter from Varian requesting variance from the hazardous waste facility permit requirements for storage in containers and for the elementary neutralization treatment unit was received by DHS.

On May 6, 1983, the Department of Health Services (DHS) received another letter from Varian requesting reclassification of their interim status document to a generator-only status because the facility was not storing hazardous waste longer than 90 days and because the facility was not treating hazardous waste, except for elementary acid neutralization.

On March 30, 1984, a generator and variance inspection was conducted by DHS and the management was notified regarding the need of a leak detection system for the elementary acid neutralization unit to meet state requirements for obtaining a variance.

On May 11, 1984, DHS denied the facility's request for variance from hazardous waste facility permit requirements on the neutralization unit. The denial was based on a concern regarding the possible leakage of hazardous waste from the sumps used for neutralization of the acid wastewater which could contaminate surrounding soils and groundwater. However, the facility was granted generator status for the storage of hazardous waste in containers (drums).

On May 23, 1985, Varian notified DHS by letter of a leak in the 400-gallon acid wastewater sump on May 5, 1985. The leak was promptly contained and an estimated 20 gallons of wastewater escaped. Wastewater analyses were performed and the facility believed that the 20 gallons had no effect on the environment. The acid wastewater sump was reconditioned and upgraded at that time.

During the 1987 inspection, Dennis Baker stated that in 1985, Varian removed an existing neutralization tank and replaced it with a new one. A new holding tank was also installed in 1985.

On January 27, 1986, the facility reapplied for a variance on the neutralization unit. The variance

application is presently being reviewed by the Department's permitting unit.

V. General Description of Facility:

The facility is located on about 10 acres in the San Tomas Business Park of Santa Clara, California which is zoned for commercial/industrial use. The property is bounded on the North side by the Bayshore Freeway and on the East side by the San Tomas Expressway.

The facility treats approximately 1,570 gallons of wastewater a day in an acid neutralization unit.

There is also a drum storage area at the facility which has a capacity to hold a maximum of 20 fifty-five gallon drums.

Varian designs, builds, markets and services high technology products. These products include electron tubes, solid state devices, vacuum components and electronic devices based on vacuum technology, analytical methods, medical procedures and magnetic components.

VI. Hazardous Waste Activity Description:

Varian Associates, Inc., Solid State Microwave Division designs, builds, markets and services high technology products for customers in industry, communications, defense, science, and medicine. Products include electron tubes, solid state devices, vacuum components, and systems based on vacuum technology, analytical methods, medical procedures and magnetic components.

Hazardous wastes generated from semiconductor manufacturing processes are flammables, corrosives, poisons, and halogenated wastes. These wastes are sent off-site for disposal, treatment or recycling in compliance with all hazardous waste regulations.

Wastewaters for the acid neutralization (treatment) unit include waste/spent nitric acid, sulfuric acid, hydrochloric acid and aqua regia solutions with deionized water. These wastewaters are gravity fed into the acid collection sump thorugh pipelines coming from various work stations and the semiconductor overflow drain.

Elementary Acid Neutralization (Treatment) Unit

The elementary acid neutralization (treatment) unit measures 3x6x12 feet along with a transfer sump which is round and measures 4 feet deep and 5 feet in diameter. The treated wastewater is discharged into the San Jose/Santa Clara Water Pollution Control Plant.

Rinse waters containing solutions of hydrochloric acid, nitric acid, sulfuric acid, phosphoric acid, sodium hydroxide, hydrogen peroxide, ammonium hydroxide, and small amounts of nickel, bromine, fluorine, gold and silver are treated in the acid wastewater neutralization unit. Processes creating the waste include: cleaning, etching, plating, developing and other operations done on a small scale as part of production of solid state oscillators, amplifiers, YIG tuned devices, and microwave semiconductors.

Wastewaters from process areas are gravity fed into either the transfer sump or the neutralization tank. Wastes collected in the transfer sump are pumped into the neutralization tank by pumps which are controlled by float switches. The tank also has a high level alarm. Wastes treated in the neutralization tank first enter a holding tank which equalizes the flow. Then the water enters a mixing tank where the pH is neutralized via a caustic soda injection which is monitored by a pH probe. A pH of between 5 and 10.5 is maintained in the outflow as required by city ordinance. The tank is mounted in the ground and is surrounded by asphalt. Tanks and piping are made of polypropylene which is highly resistant to acid solutions. Pipes are fuse sealed where joined together.

Drum Storage Area

The drum storage area is a locked, fenced area of asphalt pavement and has two concrete diked areas recessed into the ground and painted with an epoxy paint. The dimensions are 20x20 feet. An asphalt berm surrounds the entire area as a tertiary containment. The barrels are on wooden pallets to raise them above any rain water which may collect in the dikes. This rainwater is sampled and pumped out before it reaches the drum bases.

Equipment such as a safety shower, eyewash and fire extinguisher are inspected and maintained within the

area. The area is locked at all times and only three keys are issued for the area. All operations are controlled by the environmental coordinator. The area will hold a maximum of 20 fifty-five gallon drums, and is used to hold much smaller containers which are shipped out within 90 days of their collection.

The areas are divided up to separate acids, poisons, flammables, and halogenated wastes. This is accomplished by sectioning within the concrete dikes.

The collected waste is placed in containers of a compatible material, i.e., acids in polypropylene, xylene in metal containers, etc. The materials are collected in the type of containers with which they are known to be compatible. These waste containers which are numbered are collected each Wednesday from the satellite accumulation stations on a cart and brought to the waste yard and placed in designated barrels. The waste is collected by people who are very well informed on compatibles and the segregation of such chemicals as a part of their routine training. The waste is supervised by the environmental coordinator. The facility has a system for collection, segregation, and verification of such wastes within the facility.

Safety equipment is stored in the waste yard (respirators, goggles, gloves, absorbent materials). The self-contained breathing apparatus and spill cart is within 25 feet of the waste yard. There is a separate alarm system for the waste yard and a PA system to communicate with the waste handler.

VII. Violations:

1. Health and Safety Code (H&SC), Section 25123.3(d)(4).

   Varian violated H&SC, Section 25123.3(d)(4), in that on or about July 25 Varian failed to label containers at their satellite accumulation stations with the words Hazardous Waste and the initial date of accumulation .

   At the facility's satellite accumulation stations (Photos #1 and #2, Attachment #4) I observed that the facility had not labeled hazardous waste containers with the words hazardous waste or with the initial date of accumulation of the hazardous waste.

VIII. Observations:

The following observations were made during the inspection of Varian on July 25, 1989.

Upon arrival at the facility I was questioned about my citizenship, given a visitor's badge and announced to Mr. Baker.

Mr. Baker came out to the reception area to get me. We went to his office where I met Mr. Kern. During the meeting, the purpose of my inspection was discussed. Mr. Baker described the facility's operation (see General Description of Facility and Hazardous Waste Activity Description).

Following the initial interview, I made a limited record review to confirm continued compliance. I especially reviewed the current Biennial Report, Closure Plan, Training Plan, Contingency Plan, Manifests and Inspection Schedules. I found all of these items to be in compliance.

I then made a complete walk-through of the facility with special emphasis on the hazardous waste management area.

I inspected and photographed the Elementary Acid Neutralization (Treatment) Unit, the Drum Storage Area and the Satellite Accumulation Areas.

Everything was in order and no violations were observed except that Mr. Baker was not aware that the Satellite Accumulation containers must be labeled as "Hazardous Waste" although they were labeled as "Waste". Also, they were not marked with an initial accumulation date although there was a clipboard log at the site to log in dates of deposits/accumulations.

I explained to Mr. Baker and Mr. Kern that the containers must be labeled "hazardous waste" or other words that identify the contents of the container and with an initial accumulation date on the container.

IX. Sampling Summary:

No samples of hazardous waste were taken.

X. Discussion with Management:

The above cited violation was discussed with Mr. Baker and Mr. Kern who made no comments about the violation; however, he stated that the facility would correct the violation and achieve compliance as soon as possible.

Ref 3

UNITED SOIL ENGINEERING, INC.
Soil, Foundation and Geological Engineers
3476 EDWARD AVENUE, SANTA CLARA, CALIFORNIA 95050 (408) 988-2990

File No. 7-1779-S1
February 9, 1977

Sobrato-Berg Properties
2775 Middlefield Road
Palo Alto, California 94306

Attention: Mr. John Sobrato

Subject: Proposed Industrial Complex for Data Products
San Tomas Business Park, Olcott Street
Santa Clara, California
SOIL AND FOUNDATION INVESTIGATION

Gentlemen:

We are pleased to transmit herewith the results of our soil and foundation investigation performed for the proposed industrial structures located at the cul-de-sac of Olcott Street in the San Tomas Business Park, Santa Clara, California.

Our findings indicate that the subject property is suitable for the proposed industrial buildings provided the recommendations contained in this report are carefully followed.

The accompanying report shows our findings in the subsurface investigation, laboratory analyses, and our recommendations and conclusions based on these findings.

Very truly yours,

UNITED SOIL ENGINEERING, INC.

Kendall W. Price
Project Geologist

Max M. Gahrahmat, P.E.

KWP:MMG:dp

Copies: 3 to Sobrato-Berg Properties
2 to S. K. Noravian and Associates
2 to Dennis Kobza A.I.A. and Associates

File No. 7-1779-S1

SOIL AND FOUNDATION INVESTIGATION

Purpose and Scope

The purpose of the soil investigation on the subject proposed industrial complex on Olcott Street in the San Tomas Business Park, Santa Clara, California, was to determine the conditions of the surface and near-surface soil and, based on the conditions revealed by this investigation, to report the soil load bearing values and foundation suitability for the construction of industrial buildings. The work performed consists of a field investigation, a laboratory testing program, analyses of the field and laboratory data, and the preparation of this report.

Location and Description of Site

The industrial development is located within the City of Santa Clara and is bounded to the south by undeveloped industrial property, to the north by Bayshore Freeway, to the east by San Tomas Expressway, and to the west by undeveloped industrial property and the cul-de-sac of Olcott Street (see Figure 1 - Site Plan). The area is essentially level with no structures at the time of our investigation. In the past, the site has been used for agricultural purposes, and the top 4-6 inches (10-15 cm.) of soil is contaminated with decaying vegetation and unsuitable as fill material. A large stand of trees is located on the northern portion of the property. Recommendations for removal of the contaminated topsoil and the trees are discussed in the grading section of this report.

The descriptions in this report are based on a site reconnaissance by the Project Geologist and a site plan provided us by the office of Dennis Kobza A.I.A. and Associates, dated December 29, 1976.

Field Investigation

A field investigation was performed at the project site on February 7, 1977, by the Project Geologist. A total of 6 borings were drilled to depths of 15 to 26 feet (4.6-8 m.) deep below the existing ground surface. A truck-mounted drill rig with power-driven, 6-inch (15 cm.) diameter, continuous flight augers was used to advance the borings. Free water was encountered between 10½ and 11 feet (3.2 and 3.4 m.) below the existing ground surface. The soils encountered were logged continuously in the field during the drilling operations. Relatively

undisturbed subsurface soil samples were obtained by hydraulically pressing a 2½-inch (6.4 cm.) O.D. split-tube sampler 18 inches (46 cm.) into the natural ground at various depths. Figures 2 through 7 (Logs of Test Borings) are a graphic representation of the soil profile and the locations and depths at which the samples were obtained.

Soils

The soils at the site are indicative of younger alluvial fan deposits, and are comprised mainly of organic-rich clays and silty clays that locally contain fresh-water fossils. Minor amounts of sand and gravel were encountered. Water was encountered within those areas of highest concentration of non-cohesive material which was located at 10½ and 11 feet (3.2 and 3.4 m.) below the existing ground surface. The near-surface soils at the site exhibit a moderately high plasticity index. Figures 2 through 7 show a detailed soil profile.

Laboratory Investigation

A laboratory testing program was performed directed toward a quantitative determination of the physical and engineering properties of the soils underlying the site. All the relatively undisturbed soil samples were tested for moisture content and dry density, in order to determine the consistency of the soil and the moisture variation throughout the explored soil profile. A simple direct shear test was performed on a selected soil sample to evaluate the strength characteristics of the soils for the foundation suitability report. The sample for direct shear was placed in water for a minimum of 24 hours prior to testing, and then sheared under undrained conditions at loads of 1, 2 and 4 kips. One laboratory compaction test was performed on a near-surface soil sample in accordance with the ASTM D1557-70 test procedure. An Atterberg Limits test was also performed on the sample for classification and evaluation of the expansive potential of the near-surface soil. Results of the laboratory tests are presented in Table I and in Figures 8 and 9 of Appendix "A".

CONCLUSIONS AND RECOMMENDATIONS

General

1. It is our understanding that the proposed structures will be one and two-story, tilt-up concrete wall construction with the total anticipated column loads on the order of 80 kips for interior columns and 4.5 kips per linear foot for exterior walls.

2. We believe additional imported soil is required to bring the building pad up to finished grade. We recommend this imported soil to be granular and non-expansive in nature.

3. It is concluded that the soils on the entire site have adequate strength to support in their undisturbed conditions, or as properly compacted fill, the anticipated loads to be imposed by the proposed structures and fills without detrimental settlement, provided the conditions set forth in this report are met.

4. The near-surface native soil within this property was found to possess moderate expansive characteristics when subjected to fluctuations in moisture content. The continuous cultivation of the land has left approximately the top foot of the native soil in a very loose condition. Below this loose surface material the soils were found to be essentially moist and firm. Native soil which is free of organics or other deleterious material may be used as compacted fill.

Grading and Site Development

5. The placement of fill and control of grading operations at the site must be conducted in accordance with the following paragraphs:

6. We recommend at least 4 inches (10 cm.) of organically contaminated native soil be stripped and stockpiled for later use in the landscaping areas only or be hauled away from the project. The Soil Engineer should be present during this operation for additional recommendations.

7. All trees not utilized in the landscaping should be removed. The depressions left by their removal should be backfilled with clean on-site native soil. This soil should be placed in 6-8 inch (15-20 cm.) lifts and compacted to not less than 90% relative compaction in accordance with ASTM test procedure D1557-70.

8. Following the stripping operations, the upper foot of material should be excavated and stockpiled for later use. The then-exposed surface should be scarified to a depth of 6-8 inches (15-20 cm.) and compacted to 90% relative compaction. The excavated material should then be replaced in 6-inch (15 cm.) lifts and compacted to not less than 90% relative compaction in accordance with ASTM test procedure D1557-70.

9. Rework of the existing soil should be tested prior to any additional fill.

10. The imported soil for engineering fill shall be approved by the Soil Engineer before commencement of the grading operations. This soil should be granular in nature with a plasticity index not exceeding 12.

11. When fill material includes rocks, nesting of large rocks will not be allowed and all voids must be carefully filled by proper compaction. Rocks larger than 4 inches (10 cm.) in diameter should not be used for the final 2 feet (.6 m.) of building pad.

12. The Soil Engineer should be notified at least 2 days prior to any grading operations so that he may coordinate the work in the field with the Contractor.

13. Any and all water wells should be capped in accordance with the Santa Clara County Health Department requirements. At least 3 feet (1 m.) of concrete should be placed on top of the well. Under no condition should a proposed structure be built over an abandoned well.

Excavation Characteristics

14. Engineering reconnaissance and exploratory borings data support our opinion that cuts of approximately 10 feet (3 m.) deep can be made with conventional heavy-duty equipment.

15. Judging from the response of our drilling equipment and the samples taken, it is our opinion that trenching to depths of 5 feet (1.5 m.) below the existing ground surface will not need any shoring. However, below 5 feet (1.5 m.) shoring will be required.

Foundation Design Criteria

16. The proposed structures may be supported on continuous perimeter foundations

with isolated interior spread footings or by end bearing straight shaft or belled end caissons. Recommendations for these two types of foundations are discussed in the following paragraphs:

17. For one-story tilt-up structures, all continuous perimeter and isolated interior footings shall be founded a minimum of 28 inches (.7 m.) below the finished floor elevation or 18 inches (.5 m.) below the rough soil grade. For the foregoing conditions, the recommended allowable bearing value is 2,500 p.s.f. for both continuous strip footings and isolated spread footings. This bearing value is for dead plus live load. When including short-term seismic loads in the bearing calculation, the recommended bearing value may be increased by 1/3.

18. Straight shaft or belled type foundations should be embedded 5 feet (1.5 m.) below the existing grade. The allowable end bearing value for this type of foundation is 5,000 p.s.f.

19. If drilled caissons are to be utilized, they have to be used for all interior and exterior columns.

20. The Soil Engineer must inspect all the drilled caisson holes prior to the concrete pouring.

Concrete Slabs-on-Grade Construction

21. A minimum of 6 inches (15 cm.) thick crushed rock should be used between the finished subgrade and concrete slabs.

22. Use of a vapor barrier under concrete slabs is optional depending on the nature of the floor covering to be applied. If a barrier is used, an acceptable base section would be 4 inches (10 cm.) of concrete aggregate, plastic membrane, and 2 inches (5 cm.) of sand over the membrane.

23. Prior to placing the vapor membrane or pouring concrete, the slab subgrade should be moistened with water to reduce the swell potential if deemed necessary by the Soil Engineer at the time of construction.

24. Due to differential settlement of the fill, a dish-like configuration of the building floor slabs should be expected. It is recommended that the previously estimated settlement be considered in floor design and that sufficient steel should be used to prevent vertical separation of any floor element.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations presented herein are based on the soil conditions revealed by our test borings and evaluated for the proposed construction planned at the present time. If any unusual soil conditions are encountered during the construction, or if the proposed construction will differ from that planned at the present time, United Soil Engineering, Inc. should be notified for supplemental recommendations.

2. This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the necessary steps are taken to see that the Contractor carries out the recommendations of this report in the field.

3. The findings of this report are valid as of the present time. However, the passing of time will change the conditions of the existing property due to natural processes, works of man, from legislation or the broadening of knowledge. Therefore, this report is subjected to review and should not be relied upon after a period of three years.

Logged By: KP

Date Drilled: 2-7-77

EXPLORATORY BORING LOG

Hole No. B-2

Job No. 7-1779-S1

Dry Density p.c.f.	Moisture Content %	Penet. Resist. Blows/ft.	Unconf. Comp. Strength, k.s.f.	Direct Shear Test "C" k.s.f.	Direct Shear Test "ø" Degree	Sample Number	Depth in Feet	Boring Log	DESCRIPTION
							1		Medium to dark brown silty CLAY; moist; very stiff CL
84.4	22.0			.96	22	2-1			
							5		Light brown silty CLAY; moist; very stiff CL
97.4	29.3					2-2	10		occasional sand ▽
									Light brown clayey sandy SILT; very moist; firm SM
95.1	29.5					2-3	15		Light brown sandy silty CLAY CL
									Boring terminated @ 16'

Remarks:

Fig. 3 - Log of Boring #2

Logged By: KP

Date Drilled: 2-7-77

EXPLORATORY BORING LOG

Hole No. B-1

Job No. 7-1779-S1

Dry Density p.c.f.	Moisture Content %	Penet. Resist. Blows/ft.	Unconf. Comp. Strength, k.s.f.	Direct Shear Test "C" k.s.f.	Direct Shear Test "φ"	Sample Number	Depth in Feet	Boring Log	DESCRIPTION
							1		Medium brown silty CLAY; moist; stiff; to dark brown color CL
103.5	17.7					1-1	5		Light brown with cream color silty CLAY; occasional fine gravels; moist; very stiff CL occasional rock fragments
93.0	31.3					1-2	10		Sandy silty CLAY with occasional fine gravels; very moist; stiff CL
100.1	25.0					1-3	15		Medium to light brown sandy CLAY with lenses of clayey silty sand; very moist; stiff CL
									Boring terminated @ 16'

Remarks:

Fig. 2 - Log of Boring #1

Ref 6

SUPPORTING DOCUMENTATION FOR VARIANCE REQUEST

NEUTRALIZATION UNIT

1. DESIGN

a) Types, sizes and ages of tanks and/or containers.

b) Construction materials.

Type	Construction Material	Size	Age
Neutralization tank	Polypropylene	6 feet deep 12 feet long 3 feet wide	installed 11/80
Transfer sump	Polypropylene lined concrete	4 feet deep 5 feet diameter (round tank)	installed 11/80

c) Secondary containment design.

Neutralization tank - None. Square polypropylene tank rests in the ground. Lid on top is completely removable so that inside can be inspected.

Transfer sump - Concrete sump is lined with polypropylene. Round lid can be removed if pumps and plumbing are disconnected, so inside can be inspected.

Both systems are inspected weekly and logged in a logbook.

d) Waste facility location relative to company properly lines. See attachments A,B,C,D for drawings of tanks, and map of facility.

2. WASTE CHARACTERIZATION

a) Waste type and hazardous properties:

Both units treat same material: Rinse waters containing solutions of hydrochloric acid, nitric acid, sulfuric acid, phosphoric acid, sodium hyroxide, hytogen peroxide, ammonium hydroxide, and small amounts of nickel, bromine, flourine, gold and silver.

b) Volume (design capacity and average capacity): Approximately 1570 gallons per day.

c) Compatibility:

Tanks and piping are made of polypropylene which is highly resistant to acid solution. Pipes are fuse sealed together.

3. PROCESS

a) Source of waste:

Processes creating the waste include: cleaning, etching, plating, developing and other operations done on a small scale as part of production of solid state oscillators, amplifiers; YIG tuned devices, and microwave semiconductors.

b) Handling methods:

Wastes from process areas are gravity fed into either the transfer sump or the Neutralization tank. Wastes collected in the Transfer Sump are pumped into the Neutralization Tank by pumps which are controlled by float switches. The tank also has a high level alarm. Waste treated in the neutralization tank first enters a hold tank which equalizes the flow. Then the water enters a mixing tank where the ph is neutralized via a caustic soda injection which is monitored by a pH probe. A pH of between 5 and 10.5 is maintained in the outflow as required by city ordinance. The treated effluent exits through a settling tank which allows particles to settle without discharging to the sewer. The tank is mounted in the ground and is surrounded by asphalt. It is located as shown on the plot layout attached.

c) Ultimate disposition:

Treated wastewater is discharged into the city sewer. See attachments E & F for permit and recent sample results (analyzed in Varian Lab)

4. OPERATIONAL PROCEDURES

a) Site Security.

The neutralization tank and the Waste area are both fenced and locked at all times, or someone is present when they are not. An automatic alarm system is on the pH and level should a problem arise. The Waste Yard is not alarmed, but two way radios and a buddy system is used at all times. Also safety equipment is stored in the waste (Respirators, goggles, gloves, absorbent materials.) The self-contained breathing apparatus and spill cart is within 25 feet of the waste yard also.

b) Personnel safety.

The personnel are on the job trained, and off-site trained either through corporate personnel or outside companies. A record is maintained of such training.

ADDITIONAL INFORMATION

1. Waste monitoring systems.

   The neutralization is inspectable from the inside of the tank, and transfer acid sump is inspectable from the inside when pipes and pumps are disconnected so that cover can be removed.

2. Site hydrogeology.

   See Attachment G for soils report.

3. Hazardous Waste Permits

   See Attachments H - L for copies of:

   H - California Interm Status Permit
   I - EPA Notification of Hazardous Waste Activity
   J - EPA Acknowledgement of Notification
   K - EPA Hazardous Waste Permit Application (Forms 1 and 3)
   L - Corrections to Form 3

SUPPORTING DOCUMENTATION FOR VARIANCE REQUEST

HAZARDOUS WASTE COLLECTION

Hazardous wastes are stored for less than 90 days. The following information is supplied as background:

The Waste Collection Yard is also shown on the plot diagram. It is constructed of an area of asphalt fenced in and lockable which has two diked areas recessed into the ground, made of cement and it was originally painted with an epoxy paint. The dimensions are on a diagram which is attached, and an asphalt berm surrounds the entire area as a tertiary containment. The barrels are on wooden pallets to raise them above any rain water which may collect in the dikes. This rainwater is sampled and pumped out before it reaches the drum bases.

Safety equipment such as a shower, eyewash and fire extinguisher are inspected and maintained within the area. The area is locked at all times and only three keys are issued to the area. All operations are controlled by the environmental coordinator. The area will hold a maximum of 20 fifty-five gallon drums, and is used to hold much smaller containers which are shipped out within 90 days of their collection in the waste yard.

The areas are divided up to separate acids, poisons, flammables, and halogenated wastes. This is accomplished by sectioning within the dikes which are made of cement.

The collected waste is placed in containers of a compatible material, i.e., acids in polypropylene, xylene in metal containers, etc. The materials are collected in the type of containers with which they are known to be compatible. These containers which are numbered are collected each Wednesday on a cart and brought to the waste yard and placed in the designated barrels as shown on a listing. The waste is collected by people who are very well informed of the compatibles and the segregation of such chemicals as a part of routine training. The waste is controlled by the environmental coordinator who also collects the waste and has a system for collection, segregation, and verification of such waste streams within the facility.

PART II - PERMIT (TO BE COMPLE[illegible] BY SAN JOSE/SANTA CLARA WATE[illegible]OLLUTION CONTROL PLANT)

Varian - Solid State
Microwave Division
3251 Olcott
Santa Clara, CA 95051

PERMIT NO. SC-041B
EFFECTIVE DATE 10/3/82
EXPIRATION DATE 10/3/85

A. SELF-MONITORING REQUIREMENTS:

1. EQUIPMENT REQUIRED

2. TESTING REQUIRED Semi-annual Arsenic, Cadmium, Copper, Nickel, Silver, Zinc, Fluoride and phenol

B. TIMETABLE OF COMPLIANCE - ANY DEVIATION FROM THE WASTEWATER STRENGTH OR CONDITIONS SET FORTH HEREIN MAY RESULT IN TERMINATION OF PERMIT.

Limiting Constituent	Unit of Measurement	Present	Maximum Allowable Discharge Date	Dis.	Date	Dis.	Date	Dis.
Cadmium	mg/L	0.7						
Chromium	mg/L	1.0						
Copper	mg/L	2.7						
Lead	mg/L	0.4						
Nickel	mg/L	2.6						
Zinc	mg/L	2.6						
Cyanide	mg/L	1.0						
Fluoride	mg/L	10						
Silver	mg/L	0.7						
TLm	%	50						
phenol	mg/L	30						

C. REPORTING REQUIREMENTS: Results of test under A-2 and average daily flow during test period due April and October each year.

D. OTHER REQUIREMENTS: Report all spills, upsets and/or accidetnal discharges required under Santa Clara Municipal Code Section 23-3.11.

ALL PERMITS ARE SUBJECT TO THE ABOVE CONDITIONS. ANY SUBSTANTIAL CHANGE IN QUANTITY OR QUALITY OF DISCHARGE AS REPORTED IN THE PERMIT APPLICATION(S) MUST BE REPORTED. IN THE EVENT OF SUCH CHANGE, A NEW APPLICATION MAY BE REQUIRED.

E. SPECIAL CONDITIONS

F. AGENCY APPROVAL

[illegible] McConnell Industrial Waste Inspector 2-4-83
NAME TITLE DATE

[signature] 2-10-83
NAME TITLE DATE

M. E. Giusti, Assistant Director & Deputy

STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES

Ref 8

TOXIC-SUBSTANCES
CONTROL DIVISION

HAZARDOUS WASTE INSPECTION REPORT

DATE of INSPECTION JULY 24, 1987

FIRM NAME VARIAN SOLID STATE MICROWAVE DIV. SITE CLASSIFICATION RCRA [X] Non RCRA [ ]

ADDRESS 3251 OLCOTT STREET Major [ ] Non Major [X]

SANTA CLARA, CA 95054 EPA I.D. NUMBER CAT000625392

INSPECTOR LUZ CASTILLO / SCOTT BULLOCK, HMS/WME/AHMS

OCTOBER 2, 1987
Date of Submittal

PURPOSE:

Inspection to determine compliance with Interim Status Document (ISD) and generator requirements.

BACKGROUND:

Varian Associates Solid State Microwave Division, submitted a Part A application on November 11, 1980. An ISD was issued on March 30, 1981 for storage in containers and treatment in tanks.

On April 15, 1983 Varian requested for a variance from hazardous waste facility permit requirements for storage in containers and for the elementary neutralization unit.

On May 6, 1983, DHS received another letter from Varian requesting for reclassification of hazardous waste permit to a generator-only status due to the fact that the facility was not storing hazardous waste longer than 90 days and that the facility was not treating hazardous waste, except acid neutralization.

On March 30, 1984, a generator and variance inspection was conducted by DHS (Department of Health Services) and the management was notified regarding the need of leak detection system for the neutralization unit.

On May 11, 1984, DHS denied the facility's request for variance from hazardous waste facility permit requirements on the neutralization unit. The denial was based on a concern regarding the possible leakage of the contents of the sumps used for neutralization of the wastewater which could contaminate surrounding soils. However, the facility was granted to operate as a generator-only status on the storage in containers.

(Note: Varian denied receiving this letter dated 5/11/84).

Sr. HMS/Sr. WME Charlene Williams DATE of REPORT 8-21-87

On May 23, 1985, Varian sent a letter to DHS concerning a leak in the 400-gallon acid sump on May 5, 1985. The leak was properly contained and approximately 20 gallons of wastewater escaped. Waste water analysis were performed and the facility believed that the 20 gallons did not have any effect on the soil area. The acid sump was reworked and upgraded.

During this inspection, Dennis Baker stated that in 1985, Varian removed an existing neutralization tank and replaced it with a new one. A holding tank was also installed.

On January 27, 1986, the facility reapplied for a variance on the neutralization unit. The variance application will be reviewed by the Department's permitting unit.

OWNERSHIP:

Varian Associates
611 Hansen Way
Palo Alto, CA 94303

PERSONS PRESENT:

Dennis Baker, Varian Associates SSMD, Facility Manager
Don Bell, Varian Associates SSMD, Facilities - Lead
Scott Bullock, DHS/TSCD, HMS
Luz Castillo, DHS/TSCD, WME

DESCRIPTION OF FACILITY:

Varian Associated Solid State Microwave Division designs, builds, markets, and services high technology products for customers in industry, communications, defense, science, and medicine. Products include electron tubes, solid state devices, vacuum components, and systems based on vacuum technology, analytical instruments, medical systems, and magnetic components.

Hazardous wastes generated from semiconductor manufacturing processes are flammables, corrosives, poisons, and halogenated wastes. These wastes are sent off-site for disposal, treatment or recycling.

Wastewaters for the neutralization unit include waste/spent nitric, sulfuric, hydrochloric, and aqua regia solution with deionized water. These wastewaters are gravity fed into the acid collection sump through pipelines coming from the R&D, Amplifier and Diode Yellow Room and the

semiconductor overflow drain.

The wastewaters from the acid collection sump (450 gallons) are pumped into the holding tank (250 gallons), then transferred into the neutralization tank for treatment. Treatment is accomplished through the addition of sodium hydroxide or acid to correct pH, before it is finally discharged into the city sewer.

VIOLATIONS:

1. ISD part II, 1(a)(b), 2(d); California Health and Safety Code (H&SC) Section 25200.5(c):

   Varian had been storing a hazardous waste container contaminated with poisonous liquid for three years. The waste had an accumulation date of 7/25/84. See Photo Nos. 12 and 13.

2. ISD part II, 10 and 11, part III, 4(c); Title 22, CAC, Section 67103(c):

   Varian did not have a hazardous waste warning sign posted on the perimeter fence of the neutralization unit area. See Photo No. 1.

3. ISD part IV, 1.(b)(1); Title 22, CAC, Section 67163(b)(1):

   Varian did not have a record of the description and the quantity of hazardous waste being treated at the facility.

4. ISD part V, 2(a)(1)(2)(3), (b); Title 22, CAC, Section 67212 (b)(1)(2)(3)(4):

   In the closure plan, Varian did not identify the steps necessary to completely close the facility by failing to include a) the waste treatment system, and an estimate of maximum inventory of wastes in treatment, b) an estimate of the expected year of closure. See Attachment "C", 15.0.

5a. ISD part III, 6(d)(1); Title 22, CAC, Section 67105(d)(1):

   On the personnel training plan, Varian did not include the name of the employee(s) for each position related to hazardous waste management. See Attachment "C", 6.0.

b. ISD part III, 6(d)(3); Title 22, CAC, Section 67105(d)(3):

On the description of training for hazardous waste personnel, Varian did not include the amount of both introductory and continuing training that will be given to each position. See Attachment "C", 6.0.

6a. ISD part III, 13(d); Title 22, CAC, Section 67141(d):

On the contingency plan, Varian did not list the addresses of all persons qualified to act as emergency coordinators. There was no person designated as primary emergency coordinator on the list.

During the inspection, Varian was in the process of modifying the list of emergency coordinators. The list reviewed at that time lacked the items as noted above.

b. ISD part III, 13(f); Title 22, CAC, Section 67141(f):

On the contingency plan, Varian did not include an evacuation plan that described signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous wastes or fires). See Attachment "C", 10.0.

7. H&SC, Section 25201:

In one of the facility's generation points, (EPI - MMwave), Varian had been storing two 5-gallon drums of waste cyanide and waste hydrofluoric acid for more than 90 days. The labels indicated an accumulation date of 3/11/87. See Photo Nos. 15 and 16.

8. Title 22, CAC, Section 66508(a)(2)(3), (c)(1)(2)(3):

In the neutralization yard, two 55-gallon drums containing waste oil and ethylene glycol lacked the following: the words "Hazardous Waste", the accumulation date, the composition and physical state of the waste, the statement or statements which call attention to the particular hazard properties of the waste and the name and address of the person producing the waste. See Photo Nos. 6 and 7.

9. Title 22, CAC, Section 66508(a)(3):

In the neutralization yard, the 250 and 450-gallon tanks

which are part of the neutralization unit were not labeled with the words "Hazardous Waste". See Photo Nos. 3 and 4.

10. Title 22, CAC, Section 66493(a):

Varian did not submit to the Department a Biennial Report on March 1, 1986 as required. A biennial report for 1985 was submitted on March 5, 1986.

11. ISD part III, 5(d); Title 22, CAC, Section 67104(d):

On the inspection record, Varian did not include the name of the inspector as required.

12. Title 22, CAC, Sections 66481(b) and 66482(a)(4):

Varian did not accurately and completely fill out the manifest by failing to include the EPA identification number of the designated facility. See Attachment "H".

OBSERVATIONS:

1. The hazardous waste storage and treatment areas and the workplaces were all kept neat and clean.

2. D. Baker and D. Bell didn't think the used ethylene glycol and waste oil by the neutralization yard needed hazardous waste labels since they were recyclable wastes.

3. During the inspection of the hazardous waste storage area, the bung cover of a 55-gallon drum containing waste chlorobenzene popped out. The bung cover was put in place by D. Bell.

4. On the Annual report for 1986, Varian did not include the description and the quantity of each hazardous waste the facility received, the method of treatment for each hazardous waste.

Varian claimed that they are under a non-regulated status because they have applied for a neutralization unit variance. See Attachment "E".

DISCUSSION WITH MANAGEMENT:

Luz Castillo and S. Bullock discussed with Mr. Baker the violations found concerning the hazardous waste warning sign on the entrance of the neutralization yard, the hazardous waste

labels on the waste acid tanks, and the minor modifications needed on the training and contingency plans. The hazardous waste drum contaminated with liquid poison with an accumulation date of 7/84 found on the waste storage areas and the two five-gallon drums stored longer than 90 days in Varian's EPI-MM Wave Room were also discussed.

Castillo informed Mr. Baker that according to a letter dated 5/11/84, Varian is on a generator-only status regarding storage in containers and is covered under an ISD on the neutralization system.

Mr. Baker said that he never knew about the letter. Regarding the drum with 7/84 accumulation date, Baker said that it will be disposed of. Baker mentioned that the facility will apply for a variance on storing some wastes longer than 90 days after the facility will be on a generator only status.

Regarding the removal of the neutralization tank and installation of a new one, Castillo asked Baker if DHS had been notified prior to the modification.

Baker stated that, when the facility applied for a variance on the neutralization unit in 1983, DHS informed them to upgrade the system as a result of a generator and variance inspection on March 30, 1984. So the facility upgraded the system by removing the old neutralization tank and installing a new one, reworking the 450 gallon sump, and installing a new holding tank.

Mr. Baker was also informed that the facility will be notified in a letter concerning the result of the inspection.

ATTACHMENTS:

1. Attachment "A" - Hazardous Waste Generator Checklist
2. Attachment "B" - ISD Checklist
3. Attachment "C" - Hazardous Waste Management Plan
4. Attachment "D" - Generator Biennial Report for 1985
5. Attachment "E" - Annual Facility Hazardous Waste Report for 1986
6. Attachment "F" - Variance Application Package
7. Attachment "G" - Photographs
8. Attachment "H" - Manifests

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
TOXIC SUBSTANCES CONTROL DIVISION
2151 BERKELEY WAY, ANNEX 7
BERKELEY, CA 94704

December 8, 1988

CERTIFIED MAIL

Mr. Dennis Baker
Facilities Manager
Varian Solid State Microwave Division
3251 Olcott St.
Santa Clara, CA 95054

EPA ID. NO. CAT000625392

Dear Mr. Baker:

The Department of Health Services (DHS) has received and reviewed your submittal dated October 2, 1988 which responded to our letter dated July 5, 1988. Based on that response, the Department has determined that the items required in the closure plan have been met.

Thank you for your efforts to meet all facility requirements. As requested in your letter, an evaluation guidance for closure plans is attached.

If you have any questions regarding this letter, please contact Luz T. Castillo at (415) 540- 2054.

Sincerely,

Luz T. Castillo
Waste Management Engineer
Region 2
Toxic Substances Control Division

Charlene F. Williams
Senior Hazardous Materials
Specialist
Region 2
Toxic Substances Control Division

Cert. Mail No. P814 227 210

Enclosure

cc: Steve Johnson, US EPA, Region IX
Larry Matz, S&E, HQ
Mary Locke, OLE, HQ

CFW:LTC:jdm

Ref 10

7/21/82

Varian / 3251 Olcott Street / Santa Clara / California 95050 / U.S.A. / Tel. (408) 988-1331

varian

July 13,1982
CE 82-44

California Department of Health Services
Hazardous Materials Management Section
2151 Berkeley Way
Berkeley, CA 94704

Dear Tony Hashemian:

I am writing in reference to our Extremely Hazardous Waste Disposal Permit, which I wish to renew and to amend to cover the items listed in this letter, while deleting those items not listed as extremely hazardous by Title 22.

We need to add to our permit:

add → Dry Cyanide Salts - #233 toxic
Mercury - #475 toxic for the transportation of broken thermometers to recycle or waste site.

We collect arsenic from a wafer polishing process which uses water and Chlorox. The wafer being polished is gallium arsenide, which contributes the arsenic to the waste stream. Chlorox is not extremely hazardous (sodium hypochlorite).

Our current E. H. Permit (#2-2099) lists cyanide in solution with an upper percentage of 2%. I'd like to extend this to 10% upper 2% lower to allow for our Research and Development Division which is now in our building. The 100 gallon quantity is OK. The drum or container should read plastic lined or polyethylene.

→ The arsenic in solution is a conbination slurry and rinse water. I'd like to increase the upper limit to 10% with a lower of 1%. Drums are plastic lined or polyethylene. Solid arsenic is OK, except we are attempting to use smaller drums (D.O.T. approved) for this waste to reduce wasted space. We generate very small quantities of solid arsenic and in a 60 day cycle. Therefore a quantity less than 1 gallon in size may be generated. The total quantity estimated at 20 lbs. per year not including containers, but including rags used for cleaning equipment, disposable clothing, excess arsenic.

The flammable liquids listed: Methanol, Propanol, Trichloroethylene, and Transene are not E.H. , please delete them from our new permit.

varian

The Bromine/Methanol is extremely hazardous and needs to be on the permit, Bromine 10%-6%, Methanol 94%-90%. Our Hydrofluoric acid is still required but the upper should be 15% and lower 5%. About 80 gallons a year at present rate of generation, containers - polyethylene.

I recently became the Environmental Coordinator for Varian Association, Solid State Microwave Division in Santa Clara.

Sincerely,

Thomas Lane

Thomas Lane
Environmental Coordinator
Solid State Microwave Division
(408) 988-1331, ext. 274

TL/GB/lj

RECEIVED
OCT 4 1985
ENVIRONMENTAL SERVICES

☐ REVIEW	☒ INFO
ROUTING	INITIAL/DATE
D. TSUDA	10/4
C. SCHODER	10/4
C. CLEMM	
M. SIEGEL	
AUTHOR	
RETURN TO: D. TSUDA	

Ref 12

OFFICE USE ONLY
SIC # _____
Date Rec'd _____
Fee Rec'd _____

SAN JOSE/SANTA CLARA
WATER POLLUTION CONTROL PLANT
INDUSTRIAL WASTEWATER DISCHARGE APPLICATION

The information contained in this Application is familiar to me and, to be the best of my knowledge and belief, accurate and complete.

Prepared by: Dennis Baker, Mgr. Fac. Date 10-3-85
(Name & Title)
Dennis Baker
(Signature & Title)

Executive Officer: Peter duFosse, Div. Mgr. Date 10-3-85
(Name & Title)
Peter duFosse
(Signature & Title)

A. COMPANY Varian Associates, SSMD
BUSINESS ADDRESS 3251 Olcott, Santa Clara, CA 95054 PHONE (408) 988-1331
ADDRESS OF DISCHARGE Same BLDG. PERMIT # _____
MAILING ADDRESS Same
ASSESSOR'S PARCEL NUMBER 224-47-018 SIZE OF PARCEL 205,603 (SQUARE FEET)
4.72 acres

B. INDIVIDUAL RESPONSIBLE FOR WASTEWATER Dennis Baker
PHONE 988-1331 EXT. 232 EMERGENCY PHONE 272-5107 EXT. _____

C. DESCRIPTION OF ACTIVITIES & PRODUCTS Manufacturing, Electronics
PRODUCT VOLUME (LBS/DAY) Solid State Electronics Products
(lbs. not relevant)

D. OPERATING SCHEDULE (If seasonal, explain in Section V)
SHIFT #1 0600 TO 1530 SHIFT #2 1530 TO 2400 SHIFT #3 ____ TO ____

E. NUMBER OF EMPLOYEES:

	Shift #1	Shift #2	Shift #3	Office
Weekdays	291	22		
Saturdays	10			
Sundays				

F. NO. OF SQ. FT. OFFICE SPACE 18,500 NO. OF SQ. FT. MANUFACTURING/ASSEMBLY 47,500
NO. OF SQ. FT. WASTEWATER-GENERATING SPACE 30,000 TOTAL NO. SQ. FT. 66,000

4 5

N. CHECK WHICH OF THE FOLLOWING PRETREATMENT SYSTEMS ARE USED.

____	Clarifier or Interceptor	____	Solvent Separation
____	Screen, Filter	X	Spill Protection
____	Centrifuge	____	Rainwater Diversion
____	Cyclone	____	Grinder, Hammermill Disposal
____	Grit Removal	____	Air Flotation
____	Grease or Oil Removal	X	Flow Equalization
X	Chemical Treatment	X	Export or Hauling
X	pH Control	____	Other (specify)

O. SAMPLING LOCATIONS:

Can each process wastestream be sampled prior to mixing with other waste stream?

____ Yes X No

If no, explain.

All sinks drain into 4" acid waste line under floor. The acid waste line drains into outside sumps. Treated process waste water can be sampled at treatment system.

Can total wastewater, including waste from sanitary facilities be sampled?

x Yes ____ No (at street manhole)

Number of sampling/monitoring locations 1 . (Identify in Section W.)

Explanation: Sampling of industry waste water (not including sanitary facilities) is taken at neutralization tank effluent.

P. EXPANSION PLANS (INDICATE ANY PLANS THAT WOULD AFFECT THE QUANTITY OR QUALITY OF YOUR WASTEWATER INCLUDING INCREASED OR PROJECTED CHANGES IN MANUFACTURING RATES):

None

COMPLETE SECTIONS Q THROUGH U. FOR THOSE PROCESSES OR OPERATIONS WHICH PRODUCE WASTES WHICH ARE NOT DISCHARGED INTO CITY OR STORM SEWERS OR TO SURFACE WATERS. USE SEPARATE FORM FOR EACH WASTE TYPE:

Q. WASTE STREAM TYPE: 10.0 Acid

Description of Process or Operation Producing Waste Coating Alluminum Parts

Brief Characterization of Waste Irridite Corrosive Chromic Acid

Annual Waste Production: ____ Tons/Yr. 15 Gal/Yr.
Frequency of Waste Production: ___ Seasonal X Occasional ___ Continual
___ Other (specify)

R. WASTE COMPOSITION:
Average percent solids N/A % pH Range 0 To 1
Physical State: X Liquid ___ Slurry ___ Sludge ___ Solid
___ Other (specify)

S. TRANSPORTATION:
Waste Hauled Off-site By: ___ You X Others
Name & License No. of Waste Hauler: Safety Specialist, Incl #150
3060 Raymond Street, Santa Clara
Street City
CA 95054 (408) 988-1111
State Zip Code Phone

T. OFF-SITE FACILITY RECEIVING WASTE:

Name of Facility Casmalia
Facility Operator Casmalia
Facility Location NTU Road Casmalia
Street City
CA 93429 (805) 969-5897
State Zip Code Phone

U. ON-SITE STORAGE:

Method: X Drum ___ Roll-Off Container ___ Tank ___ Lagoon
___ Other (specify)
Typical length of time wste stored: ___ Days ___ Weeks X Months
Typical volume of waste stored: ___ Tons X Gallons
Is storage site diked? X Yes ___ No
Surface drainage collection? X Yes ___ No

COMPLETE SECTIONS Q THROUGH U. FOR THOSE PROCESSES OR OPERATIONS WHICH PRODUCE WASTES WHICH ARE NOT DISCHARGED INTO CITY OR STORM SEWERS OR TO SURFACE WATERS. USE SEPARATE FORM FOR EACH WASTE TYPE:

Q. WASTE STREAM TYPE: 9.0 Acid

Description of Process or Operation Producing Waste Photoresist Stripper

Brief Characterization of Waste A-40 Stripper Corrosive

Annual Waste Production: ____ Tons/Yr. 120 Gal/Yr.

Frequency of Waste Production: ___ Seasonal ___ Occasional X Continual
___ Other (specify) _____

R. WASTE COMPOSITION:

Average percent solids N/A % pH Range 2 To 3

Physical State: X Liquid ___ Slurry ___ Sludge ___ Solid
___ Other (specify) _____

S. TRANSPORTATION:

Waste Hauled Off-site By: ___ You X Others

Name & License No. of Waste Hauler Safety Specialist, Inc. #150

3060 Raymond Street (Street) Santa Clara (City)

CA (State) 95054 (Zip Code) (408) 988-1111 (Phone)

T. OFF-SITE FACILITY RECEIVING WASTE:

Name of Facility Casmalia

Facility Operator Casmalia

Facility Location NTU Road (Street) Casmalia (City)

CA (State) 93429 (Zip Code) (805) 969-5897 (Phone)

U. ON-SITE STORAGE:

Method: X Drum ___ Roll-Off Container ___ Tank ___ Lagoon
___ Other (specify) _____

Typical length of time wste stored: ___ Days ___ Weeks X Months

Typical volume of waste stored: ___ Tons X Gallons

Is storage site diked? X Yes ___ No

Surface drainage collection? X Yes ___ No

COMPLETE SECTIONS Q THROUGH U. FOR THOSE PROCESSES OR OPERATIONS WHICH PRODUCE WASTES WHIC
ARE NOT DISCHARGED INTO CITY OR STORM SEWERS OR TO SURFACE WATERS. USE SEPARATE FORM FOR
EACH WASTE TYPE:

Q. WASTE STREAM TYPE: 8.0 Acid

Description of Process or Operation Producing Waste Tin Plating Circuits

Brief Characterization of Waste Tinposit Corrosive

Annual Waste Production: ____ Tons/Yr. 25 Gal/Yr.
Frequency of Waste Production: ____ Seasonal ____ Occasional X Continual
____ Other (specify) _____

R. WASTE COMPOSITION:
Average percent solids 3 % pH Range 0 To 1
Physical State: X Liquid ____ Slurry ____ Sludge ____ Solid
____ Other (specify) _____

S. TRANSPORTATION:
Waste Hauled Off-site By: ____ You X Others
Name & License No. of Waste Hauler Safety Specialist Inc. #150
3060 Raymond Street, Santa Clara
Street City
CA 95054 (408) 988-1111
State Zip Code Phone

T. OFF-SITE FACILITY RECEIVING WASTE:

Name of Facility Casmalia
Facility Operator Casmalia
Facility Location NTU Road Casmalia
Street City
CA 93429 (805) 969-5897
State Zip Code Phone

U. ON-SITE STORAGE:

Method: X Drum ____ Roll-Off Container ____ Tank ____ Lagoon
____ Other (specify) _____
Typical length of time wste stored: ____ Days ____ Weeks X Months
Typical volume of waste stored: ____ Tons X Gallons
Is storage site diked? X Yes ____ No
Surface drainage collection? X Yes ____ No

COMPLETE SECTIONS Q THROUGH U. FOR THOSE PROCESSES OR OPERATIONS WHICH PRODUCE WASTES WHICH ARE NOT DISCHARGED INTO CITY OR STORM SEWERS OR TO SURFACE WATERS. USE SEPARATE FORM FOR EACH WASTE TYPE:

Q. WASTE STREAM TYPE: 7.0 Acid

Description of Process or Operation Producing Waste Cleaning Quartz Tubes

Brief Characterization of Waste Hydrofluoric Acid Solution Corrosive

Annual Waste Production: ____ Tons/Yr. 100 Gal/Yr.
Frequency of Waste Production: ____ Seasonal ____ Occasional X Continual
____ Other (specify) ____

R. WASTE COMPOSITION:
Average percent solids N/A % pH Range 1 To 2
Physical State: X Liquid ___ Slurry ___ Sludge ___ Solid
___ Other (specify) ____

S. TRANSPORTATION:
Waste Hauled Off-site By: ____ You X Others
Name & License No. of Waste Hauler Safety Specialist Inc. #150
3060 Raymond Street, Santa Clara
Street City
CA 95054 (408) 988-1111
State Zip Code Phone

T. OFF-SITE FACILITY RECEIVING WASTE:

Name of Facility Casmalia Resource
Facility Operator Casmalia Resource
Facility Location NTU Road Casmalia
Street City
CA 93429 (805) 969-5897
State Zip Code Phone

U. ON-SITE STORAGE:

Method: X Drum ___ Roll-Off Container ___ Tank ___ Lagoon
___ Other (specify) ____
Typical length of time wste stored: ___ Days ___ Weeks ___ Months
Typical volume of waste stored: ___ Tons X Gallons
Is storage site diked? X Yes ___ No
Surface drainage collection? X Yes ___ No

COMPLETE SECTIONS Q THROUGH U. FOR THOSE PROCESSES OR OPERATIONS WHICH PRODUCE WASTES WHICH ARE NOT DISCHARGED INTO CITY OR STORM SEWERS OR TO SURFACE WATERS. USE SEPARATE FORM FOR EACH WASTE TYPE:

Q. WASTE STREAM TYPE: 6.0 Acid Toxic

Description of Process or Operation Producing Waste Nickel Plating

Brief Characterization of Waste Nickelex Toxic corrosive

Annual Waste Production: ____ Tons/Yr. 25 Gal/Yr.
Frequency of Waste Production: ____ Seasonal ____ Occasional x Continual
____ Other (specify) ____

R. WASTE COMPOSITION:
Average percent solids 5 % pH Range 4 To 6
Physical State: x Liquid ____ Slurry ____ Sludge ____ Solid
____ Other (specify) ____

S. TRANSPORTATION:
Waste Hauled Off-site By: ____ You x Others
Name & License No. of Waste Hauler Safety Specialist
Street City
State Zip Code Phone

T. OFF-SITE FACILITY RECEIVING WASTE:

Name of Facility Casmalia
Facility Operator ____
Facility Location ____
Street City
State Zip Code Phone

U. ON-SITE STORAGE:

Method: x Drum ____ Roll-Off Container ____ Tank ____ Lagoon
____ Other (specify) ____
Typical length of time wste stored: ____ Days ____ Weeks x Months
Typical volume of waste stored: ____ Tons x Gallons
Is storage site diked? x Yes ____ No
Surface drainage collection? x Yes ____ No

COMPLETE SECTIONS Q THROUGH U. FOR THOSE PROCESSES OR OPERATIONS WHICH PRODUCE WASTES WHI ARE NOT DISCHARGED INTO CITY OR STORM SEWERS OR TO SURFACE WATERS. USE SEPARATE FORM FOR EACH WASTE TYPE:

Q. WASTE STREAM TYPE: 5.0 Poison

Description of Process or Operation Producing Waste Cleaning MBF Equipment

Brief Characterization of Waste Arsenic contaminated, debris, rags, towels, disposable clothing, etc.

Annual Waste Production: 501bs Tons/Yr. ____ Gal/Yr.
Frequency of Waste Production: ____ Seasonal X Occasional ____ Continual
____ Other (specify)

R. WASTE COMPOSITION:
Average percent solids N/A % pH Range N/A To ____
Physical State: ____ Liquid ____ Slurry ____ Sludge X Solid
____ Other (specify)

S. TRANSPORTATION:
Waste Hauled Off-site By: ____ You X Others
Name & License No. of Waste Hauler: Safety Specialist, Inc. #150
3060 Raymond Road, Santa Clara
Street City
CA 95054 (408) 988-1111
State Zip Code Phone

T. OFF-SITE FACILITY RECEIVING WASTE:

Name of Facility Casmalia
Facility Operator Casmalia
Facility Location NTU Road Casmalia
Street City
CA 93429 (805) 969-5897
State Zip Code Phone

U. ON-SITE STORAGE:

Method: X Drum ___ Roll-Off Container ___ Tank ___ Lagoon
___ Other (specify)
Typical length of time wste stored: ___ Days ___ Weeks X Months
Typical volume of waste stored: LBS Tons ___ Gallons
Is storage site diked? X Yes ___ No
Surface drainage collection? X Yes ___ No

COMPLETE SECTIONS Q THROUGH U. FOR THOSE PROCESSES OR OPERATIONS WHICH PRODUCE WASTES WHICH ARE NOT DISCHARGED INTO CITY OR STORM SEWERS OR TO SURFACE WATERS. USE SEPARATE FORM FOR EACH WASTE TYPE:

Q. WASTE STREAM TYPE: 4.0 Solvent

Description of Process or Operation Producing Waste Photoresist UV exposure and chemical retardation of process.

Brief Characterization of Waste Chlorobenzene Flammable

Annual Waste Production: ____ Tons/Yr. 10 Gal/Yr.
Frequency of Waste Production: ____ Seasonal ____ Occasional X Continual
____ Other (specify) _____

R. WASTE COMPOSITION:
Average percent solids N/A % pH Range N/A To ____
Physical State: X Liquid ____ Slurry ____ Sludge ____ Solid
____ Other (specify) _____

S. TRANSPORTATION:
Waste Hauled Off-site By: ____ You X Others
Name & License No. of Waste Hauler Safety Specialist, Inc. #150
3060 Raymond Street, Santa Clara
Street City
CA 95054 (408) 988-1111
State Zip Code Phone

T. OFF-SITE FACILITY RECEIVING WASTE:

Name of Facility Casmalia
Facility Operator Casmalia
Facility Location NTU Road Casmalia
Street City
CA 93429 (805) 969-5897
State Zip Code Phone

U. ON-SITE STORAGE:

Method: X Drum ___ Roll-Off Container ___ Tank ___ Lagoon
___ Other (specify) _____
Typical length of time wste stored: ___ Days ___ Weeks X Months
Typical volume of waste stored: ___ Tons X Gallons
Is storage site diked? X Yes ___ No
Surface drainage collection? X Yes ___ No

COMPLETE SECTIONS Q THROUGH U. FOR THOSE PROCESSES OR OPERATIONS WHICH PRODUCE WASTES WHIC ARE NOT DISCHARGED INTO CITY OR STORM SEWERS OR TO SURFACE WATERS. USE SEPARATE FORM FOR EACH WASTE TYPE:

Q. WASTE STREAM TYPE: 3.0 Acid Flammable

Description of Process or Operation Producing Waste Polishing Wafers

Brief Characterization of Waste 90% Methanol 10% Bromine
Flammable Corrosive.

Annual Waste Production: ____ Tons/Yr. 60 Gal/Yr.
Frequency of Waste Production: ____ Seasonal ____ Occasional x Continual
____ Other (specify)

R. WASTE COMPOSITION:
Average percent solids NA % pH Range 1 To 3
Physical State: x Liquid ___ Slurry ___ Sludge ___ Solid
___ Other (specify)

S. TRANSPORTATION:
Waste Hauled Off-site By: ____ You x Others
Name & License No. of Safety Specialist Inc. #150
Waste Hauler 3060 Raymond Santa Clara
Street City
CA. 95054 (408) 988-1331
State Zip Code Phone

T. OFF-SITE FACILITY RECEIVING WASTE:

Name of Facility Casmalia Resources
Facility Operator " "
Facility Location NTU Rd. Casmalia
Street City
CA. 93429 (805) 969-5897
State Zip Code Phone

U. ON-SITE STORAGE:

Method: x Drum ___ Roll-Off Container ___ Tank ___ Lagoon
___ Other (specify)
Typical length of time wste stored: ___ Days ___ Weeks x Months
Typical volume of waste stored: ___ Tons x Gallons
Is storage site diked? x Yes ___ No
Surface drainage collection? x Yes ___ No

COMPLETE SECTIONS Q THROUGH U. FOR THOSE PROCESSES OR OPERATIONS WHICH PRODUCE WASTES WHICH ARE NOT DISCHARGED INTO CITY OR STORM SEWERS OR TO SURFACE WATERS. USE SEPARATE FORM FOR EACH WASTE TYPE:

Q. WASTE STREAM TYPE: 2.0 Solvents

Description of Process or Operation Producing Waste Degreasing of metal parts.

Brief Characterization of Waste TMS Mix Freons

Annual Waste Production: ____ Tons/Yr. 500 Gal/Yr.
Frequency of Waste Production: ____ Seasonal ____ Occasional x Continual
____ Other (specify) _____

R. WASTE COMPOSITION:
Average percent solids NA % pH Range 7 To 8
Physical State: x Liquid ____ Slurry ____ Sludge ____ Solid
____ Other (specify) _____

S. TRANSPORTATION:
Waste Hauled Off-site By: ____ You x Others
Name & License No. of
Waste Hauler Calif. Solvent Recycle
Street City
State Zip Code Phone

T. OFF-SITE FACILITY RECEIVING WASTE:

Name of Facility Romic
Facility Operator
Facility Location
Street City
State Zip Code Phone

U. ON-SITE STORAGE:

Method: ____ Drum x Roll-Off Container ____ Tank ____ Lagoon
____ Other (specify) _____
Typical length of time wste stored: ____ Days ____ Weeks x Months
Typical volume of waste stored: ____ Tons x Gallons
Is storage site diked? x Yes ____ No
Surface drainage collection? x Yes ____ No

COMPLETE SECTIONS Q THROUGH U. FOR THOSE PROCESSES OR OPERATIONS WHICH PRODUCE WASTES WHICH ARE NOT DISCHARGED INTO CITY OR STORM SEWERS OR TO SURFACE WATERS. USE SEPARATE FORM FOR EACH WASTE TYPE:

Q. WASTE STREAM TYPE: 1.0 solvents

Description of Process or Operation Producing Waste Painting products cleaning products, wafers, substrates, metal parts and photolithographic work.

Brief Characterization of Waste Solvents Flammable

Annual Waste Production: ____ Tons/Yr. 1400 Gal/Yr.

Frequency of Waste Production: ____ Seasonal ____ Occasional x Continual
____ Other (specify) ____

R. WASTE COMPOSITION:

Average percent solids ____ % pH Range 7 To 8

Physical State: x Liquid ____ Slurry ____ Sludge ____ Solid
____ Other (specify) ____

S. TRANSPORTATION:

Waste Hauled Off-site By: ____ You x Others

Name & License No. of Waste Hauler: California Solvent Recycling Lic# 27635

2081 Bay Rd. (Street) East Palo Alto (City)

CA. (State) 94304 (Zip Code) (415) 856-7577 (Phone)

T. OFF-SITE FACILITY RECEIVING WASTE:

Name of Facility Romic Chemical Corp.

Facility Operator " " "

Facility Location 2081 Bay Rd. (Street) East Palo Alto (City)

CA. (State) 94303 (Zip Code) (415) 856-7577 (Phone)

U. ON-SITE STORAGE:

Method: ___ Drum x Roll-Off Container ___ Tank ___ Lagoon
___ Other (specify) ____

Typical length of time wste stored: ___ Days ___ Weeks x Months

Typical volume of waste stored: ___ Tons x Gallons

Is storage site diked? x Yes ___ No

Surface drainage collection? x Yes ___ No

D. **DISCHARGE CONDITIONS** — ANY DEVIATION FROM THE WASTEWATER STRENGTH OR CONDITIONS SET FORTH HEREIN MAY RESULT IN TERMINATION OF PERMIT.

Limiting Constituent	Unit of Measurement	PRESENT LIMIT		LIMIT BY 2/15/86	
		Maximum	Monthly Average	Maximum	Monthly Average
Cadmium	mg/L	0.7		0.69	0.26
Chromium	mg/L	1.0		1.0	
Copper	mg/L	2.7		2.7	2.07
Lead	mg/L	0.4		0.4	
Nickel	mg/L	2.6		2.6	2.38
Zinc	mg/L	2.6		2.6	1.48
Cyanide	mg/L	1.0		1.0	0.65
Fluoride	mg/L				
Silver	mg/L	0.7		0.43	0.24
TLm	%				
Phenols	mg/L				
Total Toxic Organics*	mg/L	1.37		1.37	
Xylene	mg/L	5.0		5.0	

* From EPA Priority Pollutant List

ALL PERMITS ARE SUBJECT TO THE ABOVE CONDITIONS. ANY SUBSTANTIAL CHANGE IN QUANTITY OR QUALITY OF DISCHARGE AS REPORTED IN THE PERMIT APPLICATION(S) MUST BE REPORTED. IN THE EVENT OF SUCH CHANGE, A NEW APPLICATION MAY BE REQUIRED.

E. **SPECIAL CONDITIONS**

In the event of any change in control or ownership, the Permit shall be cancelled. Notification shall be forwarded to the Department of Water Pollution Control of the change.

F. **AGENCY APPROVAL**

Janet McCarver — Industrial Waste Inspector — 12/20/85
NAME — TITLE — DATE

[signature] — P&A — 12/23/85
NAME Dir. of Water Pollution Control — TITLE — DATE

SAN JOSE/SANTA CLARA WATER POLLUTION CONTROL PLANT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO. SC-041B
EFFECTIVE DATE 10-3-85
EXPIRATION DATE 10-3-88

STP CONNECTION PAID (San Jose only)			
Flow-gal/day:	_____	Fee $	_____
BOD lbs/day:	_____	Fee $	_____
SS lbs/day:	_____	Fee $	_____
NH3 lbs/day:	_____	Fee $	_____
TOTAL FEE PAID		$	_____
DATE PAID	_____		

ISSUED TO: Varian Associates - Solid State Microwave Division
ADDRESS OF DISCHARGE: 3251 Olcott, Santa Clara, CA 95054

A. **SELF-MONITORING REQUIREMENTS:**

1. Equipment Required:

Composite Sampler _____ (capacity) _____ gallons
Flowmeter _____
Continuous pH Recorder X
Other _____

2. Testing Required:

The following analysis on grab X /composite _____ sample:
Testing to be performed: semiannually on effluent from neutralization system.

Cadmium	X	Nickel	X	Silver	X	Other	_____
Chromium	X	Zinc	X	TLM	_____	Xylene	X
Copper	X	Cyanide	X	Phenols	X		_____
Lead	X	Fluoride	_____	TTO*	X		_____

B. **REPORTING REQUIREMENTS:**

Average daily flow X Maximum daily flow X
Results of A2 X Other _____
Report due date(s) April and October of each year.
Flows for both metal finishing and semiconductor operations to be reported.

C. **OTHER REQUIREMENTS:** In lieu of monitoring for TTOs you may certify that your Solvent Management Plan is being implemented.

Report any spills, upsets or accidental discharges to the storm or sanitary sewers within 24-hours.

4

STATE OF CALIFORNIA—HEALTH AND WELFARE A___Y
GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
2151 BERKELEY WAY
BERKELEY, CA 94704

R-1 31

S+E
B

FILE COPY

December 22, 1987

Mr. Dennis Baker
Facilities Manager
Varian Solid State Microwave Division
3251 Olcott Street
Santa Clara, CA 95054

Dear Mr. Baker:

EPA ID #CAT000625392

The Department of Health Services (DHS) has received and reviewed your letter dated November 9, 1987 which responded to the Report of Violations (ROV) issued to Varian Solid State Microwave Division on October 5, 1987. Following are the Department's comments on the document received. The status of each violation identified in the ROV is included. The original order and numbering of each violation is retained for ease of reference.

VIOLATIONS:

1, 2 and 3. These violations have been corrected.

4. As stated in the ROV, the closure plan must include an estimate of the expected year of closure.

5 and 6. The document submitted as Attachment A did not include the names of employees on the emergency response team. A modified portion of the training plan showing the names of all hazardous waste personnel and the amount of both introductory and continuing training (i.e., CPR, Fire Extinguisher, Spill Control, etc.) given to each position must be sent to DHS.

6a. The list of emergency coordinators must include addresses as required in the ROV.

6b, 7, 8, 9, 10, 11 and 12. These violations have been corrected.

Upon receipt of this letter, Varian must correct all deficiencies noted above and submit the required documents within seven working days to DHS.

Upon review of your closure plan, the following deficiencies noted on the decontamination procedure must be addressed:

a. Specify how samples will be taken and what contaminants the samples will be analyzed;

b. Specify what solvents, surfactants or other techniques will be used to wash the equipment and structures, and

c. Specify what samples will be collected and how they will be analyzed to verify decontamination.

On the cost estimate for closure, the cost of ten soil samples are listed. It must be specified where, or under what conditions will these samples be taken and analyzed.

The items required on the closure plan and the cost estimate for closure must be sent to DHS within 60 days of receipt of this letter.

Also, in order to clarify the status of your facility, a letter dated May 11, 1984 is enclosed. Varian is still under ISD with regards to the waste water neutralization system, but not for hazardous waste storage.

If you have any questions regarding this letter, please contact Luz Castillo at (415) 540-2043.

Sincerely,

Luz T. Castillo

Luz T. Castillo
Waste Management Engineer
North Coast California Section
Toxic Substances Control Division

Sue Stack for Charlene Williams

Charlene F. Williams
Senior Hazardous Materials
Specialist
North Coast California Section
Toxic Substances Control Division

Enclosure

cc: Richard Ross, Hazardous Waste Enforcement
Paul Blais, S&E, DHS Headquarters
Karen Schwinn, U.S. EPA, Region IX

CFW:LTC:lc:na

Ref 32

interoffice

varian

to Hazardous Waste Management Branch

from Varian Associates-Solid State Microwave Division

date 3 January 1986

subject Variances from Facility Permit Requirements; Supporting Documentation

Per our application for a variance this memorandum provides the supporting documentation rerquired per your instructions.

DESIGN

Hazardous wastes are accumulated in drum type containers. We utilize three sizes; 5, 30, and 55 gal. capacity. Within each size there are open, closed ,polypropylene, and metal drum types. They are purchased new or recycled each time we have the wastes hauled off. All containers are D.O.T. approved. Secondary containment is provided through concrete dikes/berms.

In referance to our elemental neutralization unit, we have (3) all polypropylene tanks (250, 450, and 1000 gal.) with concrete vaults surrounding the 250 and 450 gal. tanks for secondary containment. The concrete vaults are epoxy coated. The 1000 gal. tank is above ground with concrete dikes/berms for secondary containment. Containment is estimated at 110%+. This unit has been approved by the city of Santa Clara Building Department and the Santa Clara/San Jose Water Pollution Control Plant.

The location of the drum accumulation area and the elemental neutralization unit on the site relative to the property lines can be found on plate no. 3 of the enclosed groundwater monitoring report.

WASTE CHARACTERISTICS

SSMD hazardous wastes fall into three categories; flammables, corrosives, and poisons. MSDS sheets are available both at the use point and in the Emergency Response Team manual. Monthly volumes of the different chemicals can be found on the second page of the attached Industrial Wastewater Discharge Application sent to the San Jose/Santa Clara Water Pollution Control Board. Wastes are segregated by type and accumulated in compatible containers for offsite disposal.

Waste characteristics of the waste water for the elemental neutralization unit include waste/spent nitric, sulfuric, hydrochloric, and aqua regia acid solutions with dionized water. Treatment is accomplished through the addition of sodium hydroxide or muriatic acid to correct pH.